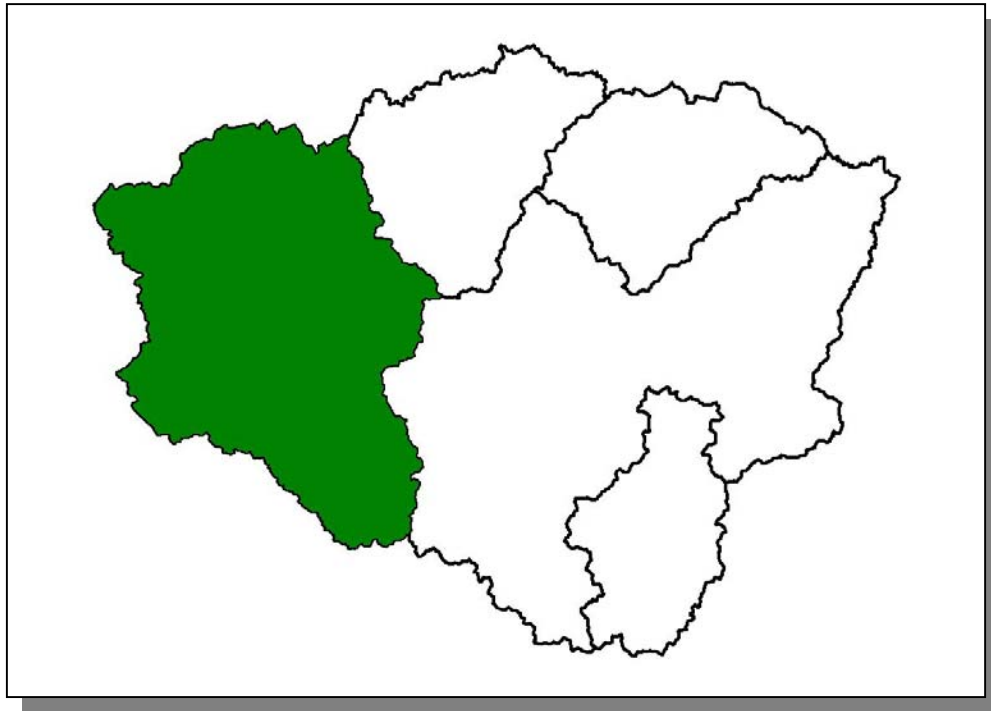
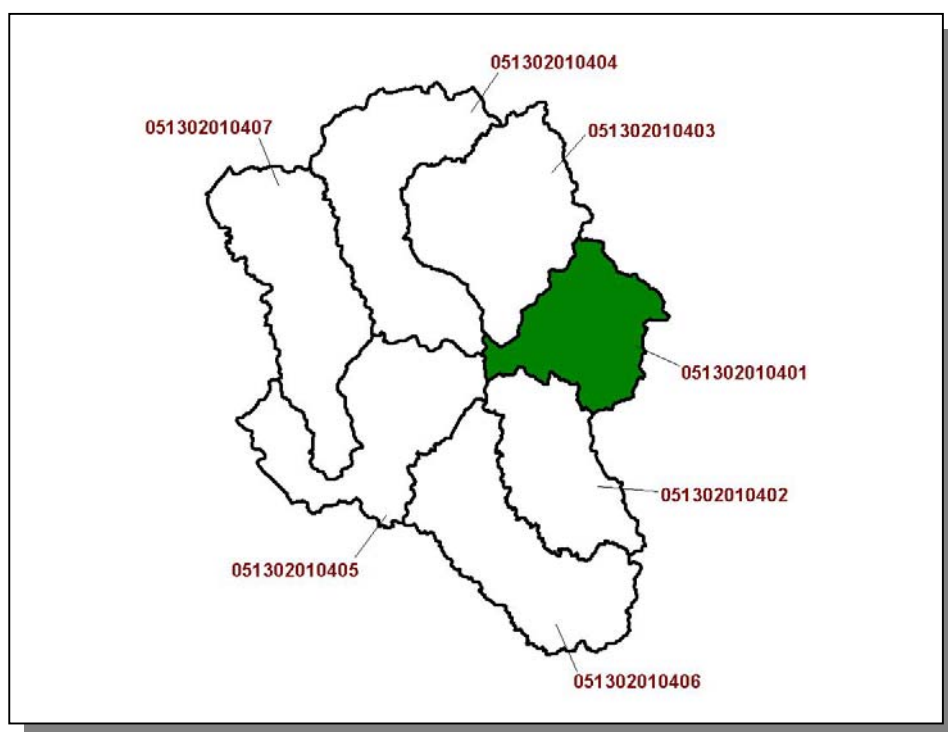


**4.2.D. 0513020104.**

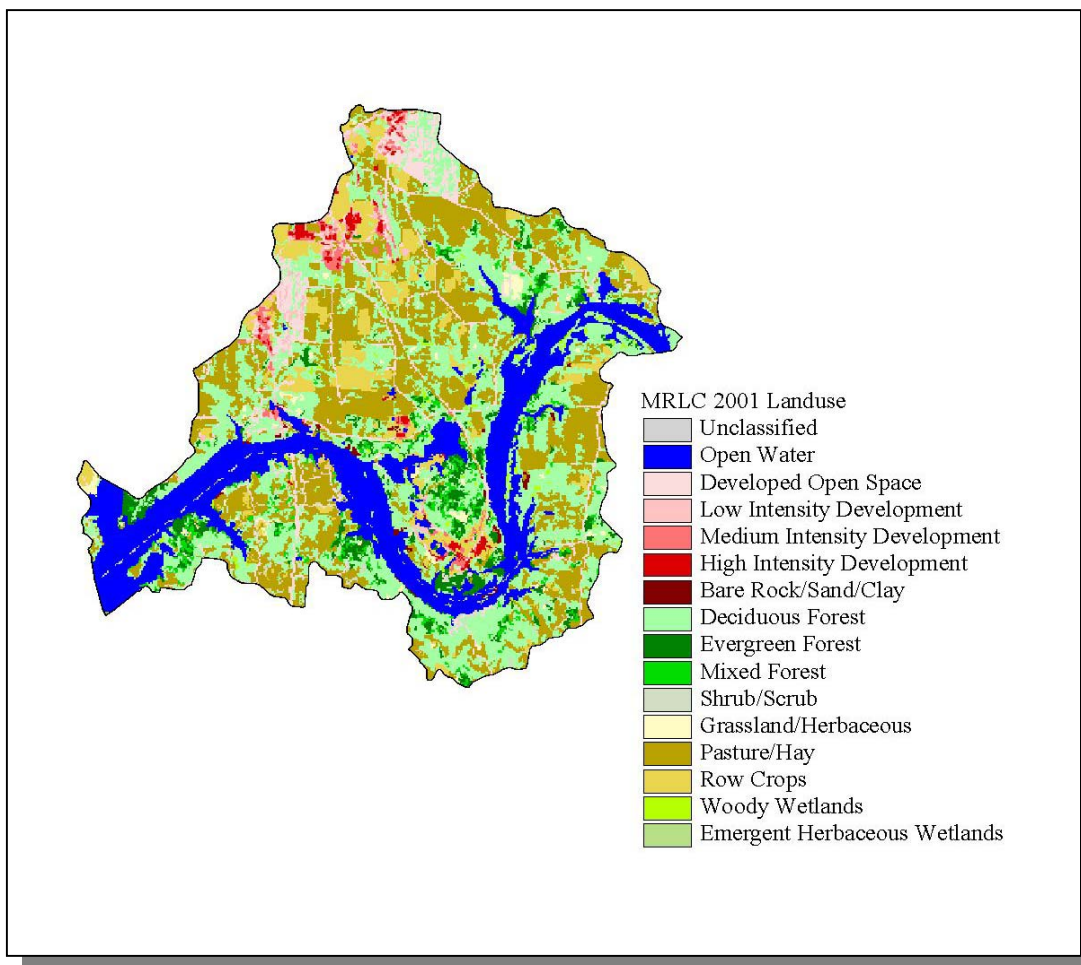


**Figure 4-90. Location of Subwatershed 0513020104.** All Old Hickory Lake HUC-10 subwatershed boundaries are shown for reference.

**4.2.D.i. 051302010401 (Cumberland River).**

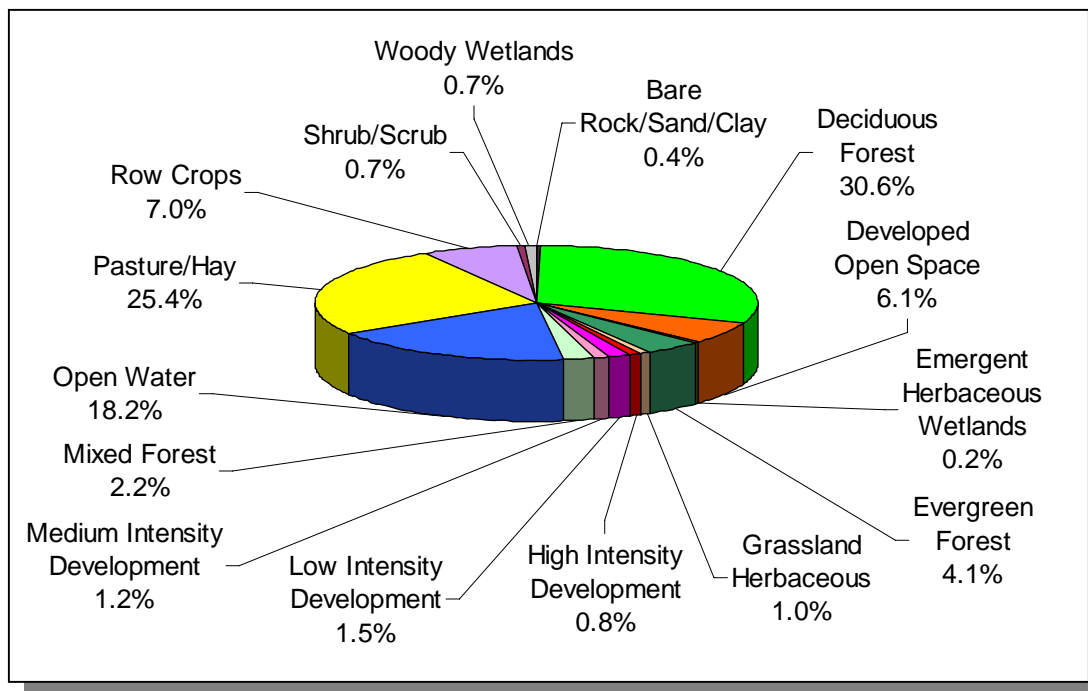


**Figure 4-91. Location of Subwatershed 051302010401.** All HUC-12 subwatershed boundaries are shown for reference.

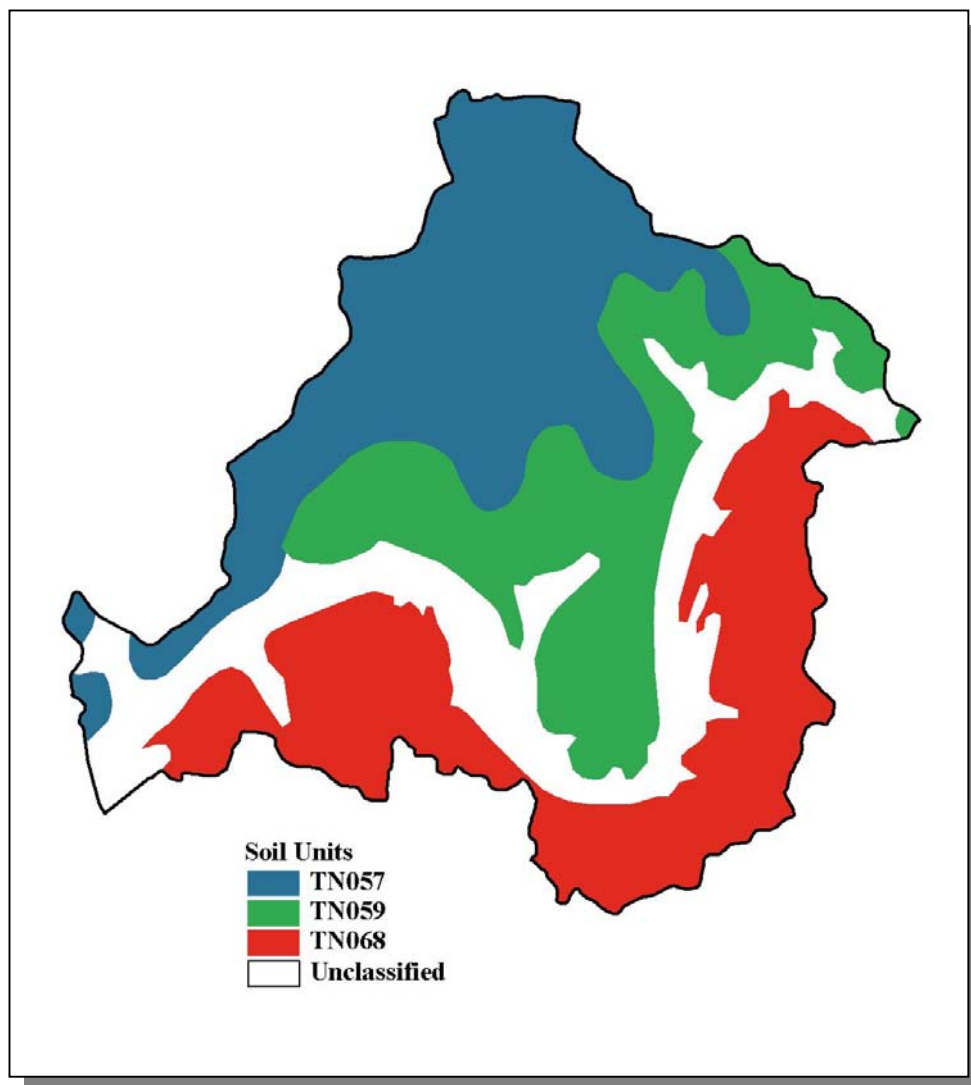


**Figure 4-92. Illustration of Land Use Distribution in Subwatershed 051302010401.**

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**Figure 4-93. Land Use Distribution in Subwatershed 051302010401.** More information is provided in Appendix IV.



**Figure 4-94. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010401.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN059	0.00	C	1.08	5.70	Silty Clayey Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37

**Table 4-75. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010401.** The definition of “Hydrologic Group” is provided in Appendix IV.

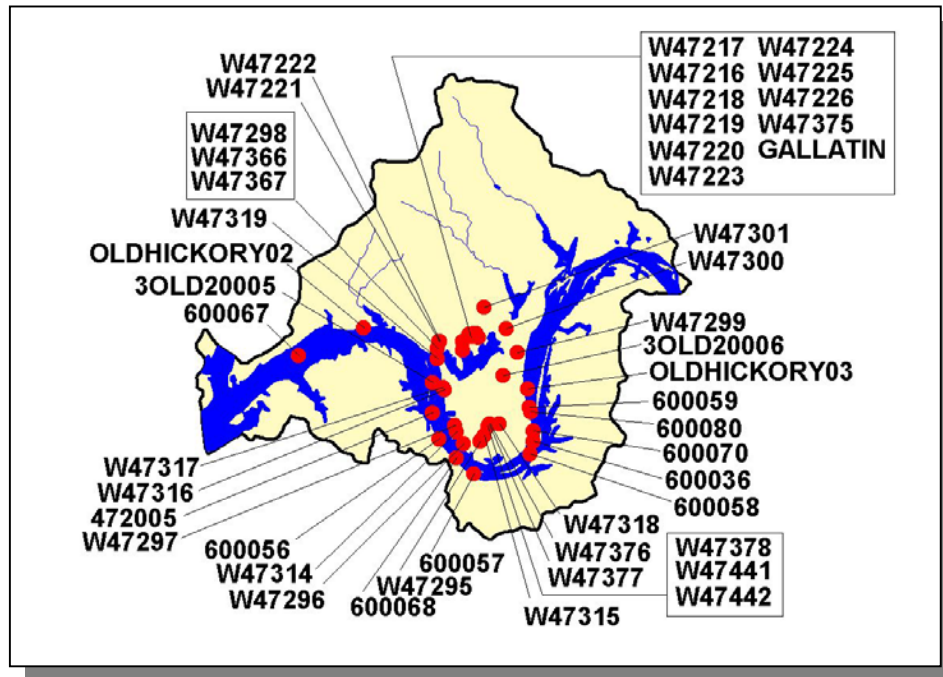
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	4.19	4,328	5,109	5,466	26.3

**Table 4-76. Population Estimates in Subwatershed 051302010401.**

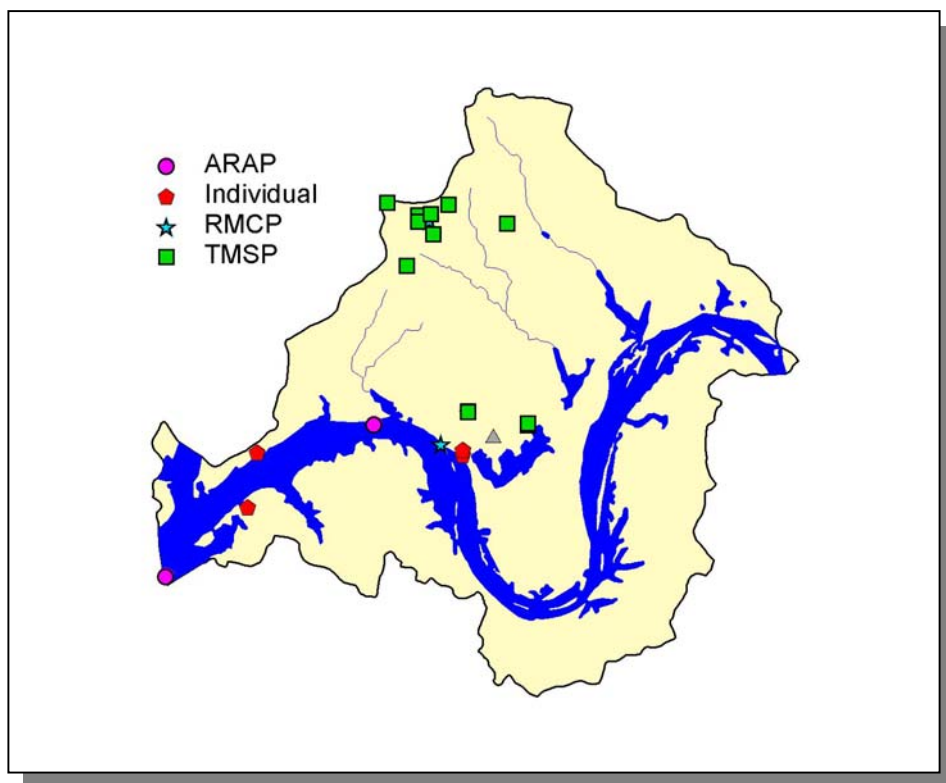
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	18,794	7,635	6,931	704	0

**Table 4-77. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010401.**

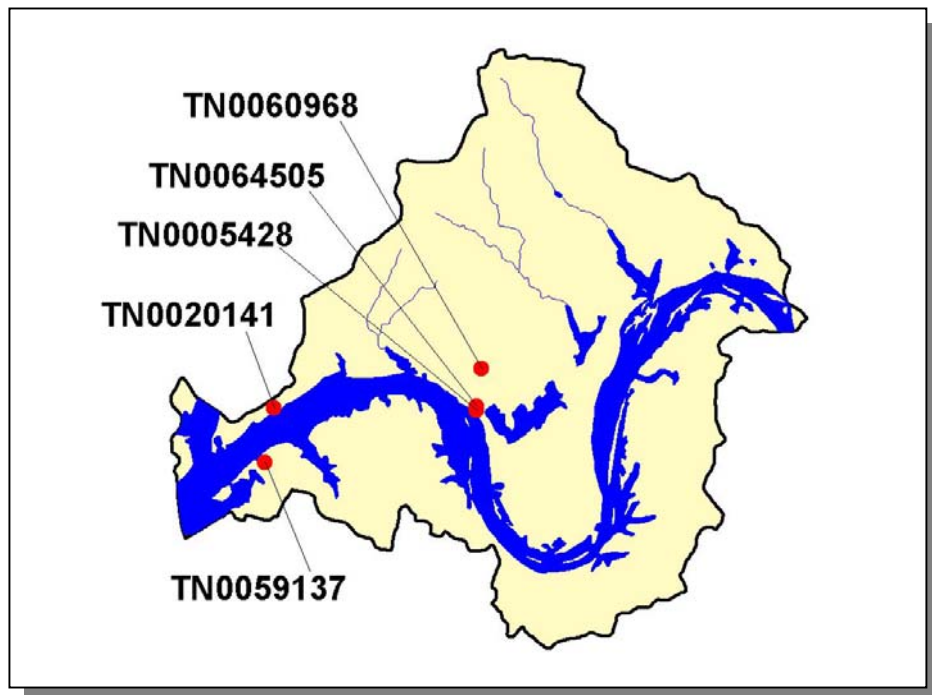


**Figure 4-95. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010401.** More information, including site names and locations, is provided in Appendix IV.

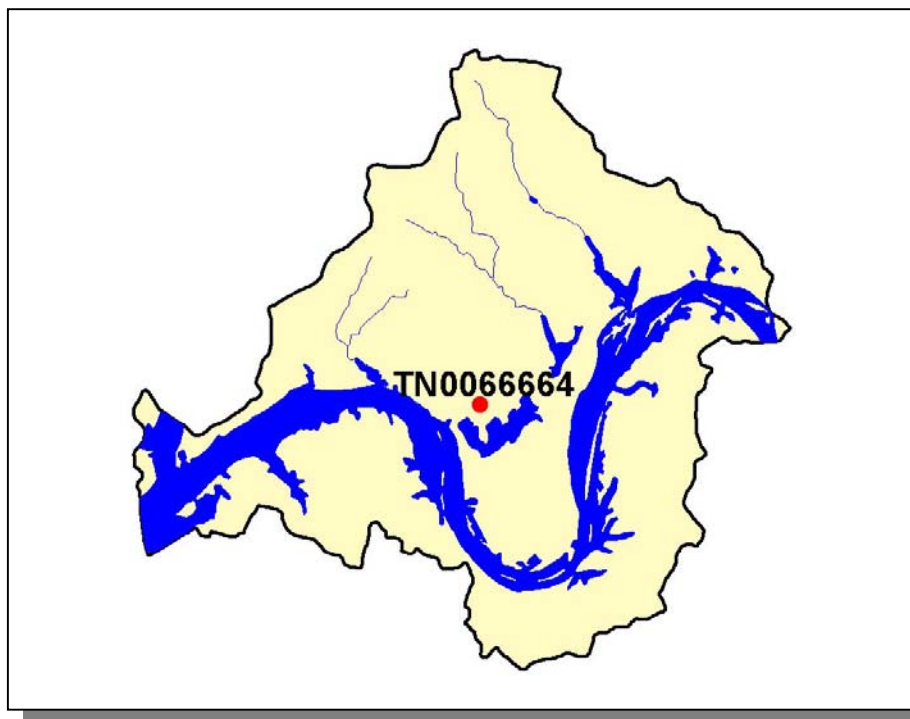
**4.2.D.i.a. Point Source Contributions.**



**Figure 4-96. Location of Permits Issued in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

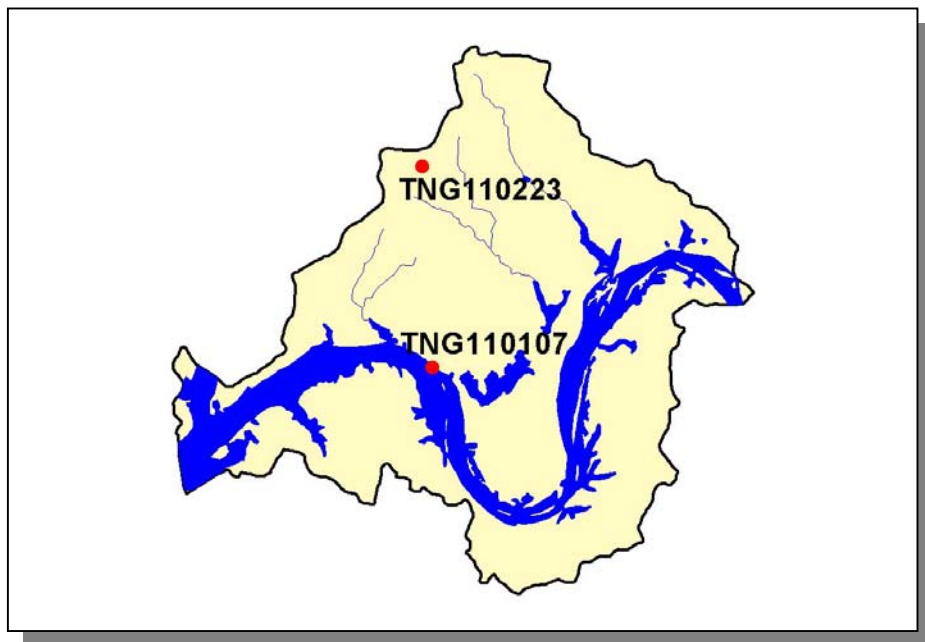


**Figure 4-97. Location of Active NPDES Sites in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

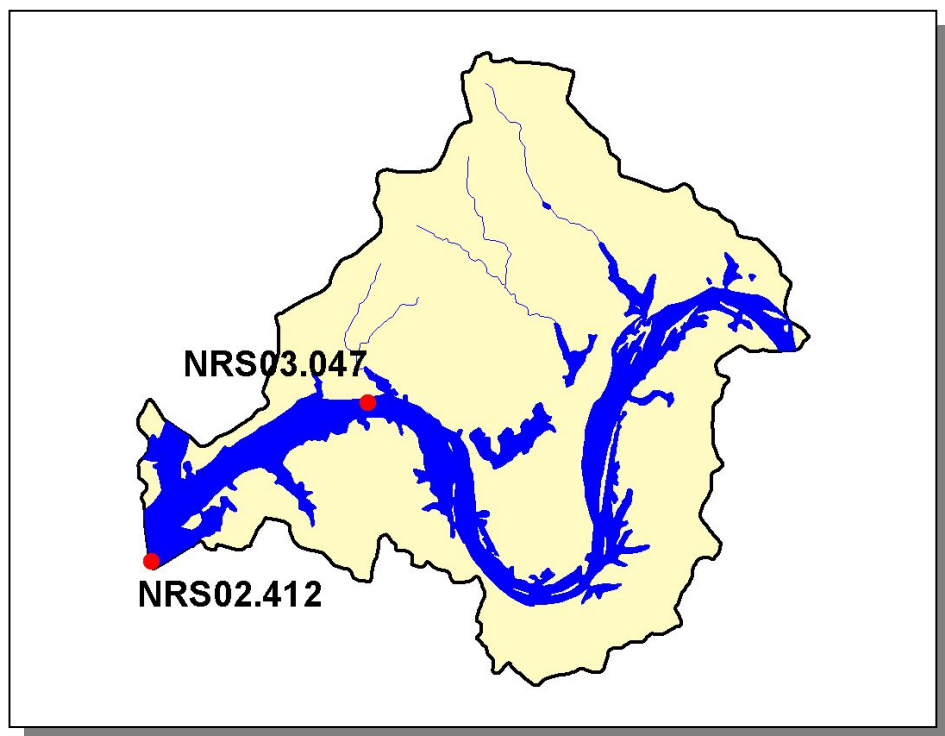


**Figure 4-98. Location of Active Mining Sites in Subwatershed 051302010401.** More information, including the names of mining operations, is provided in Appendix IV.

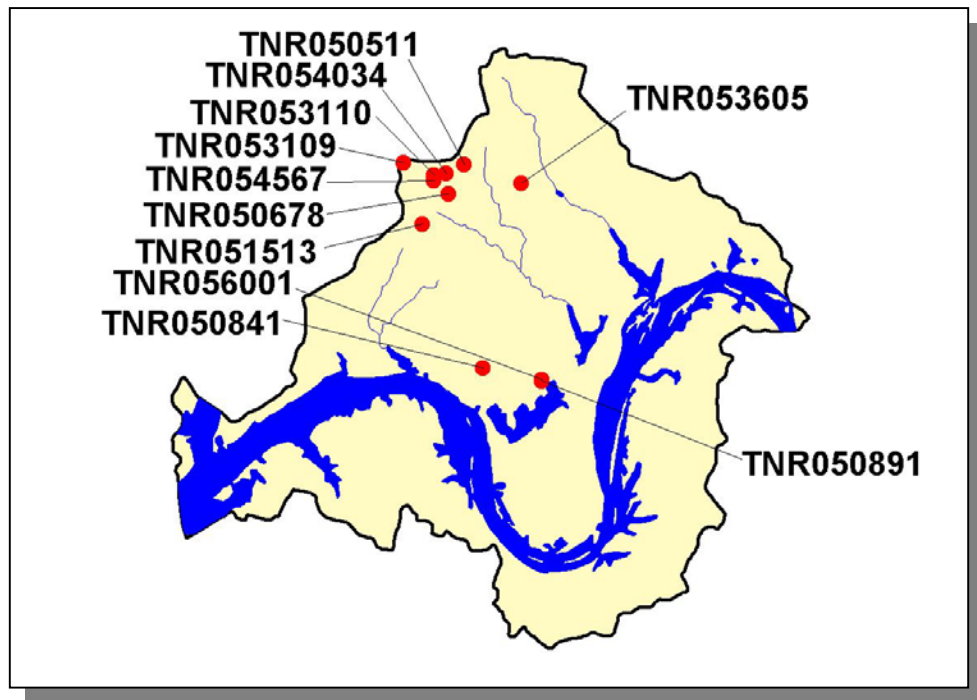




**Figure 4-99. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010401.** More information is provided in Appendix IV.



**Figure 4-100. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010401.** More information is provided in Appendix IV.

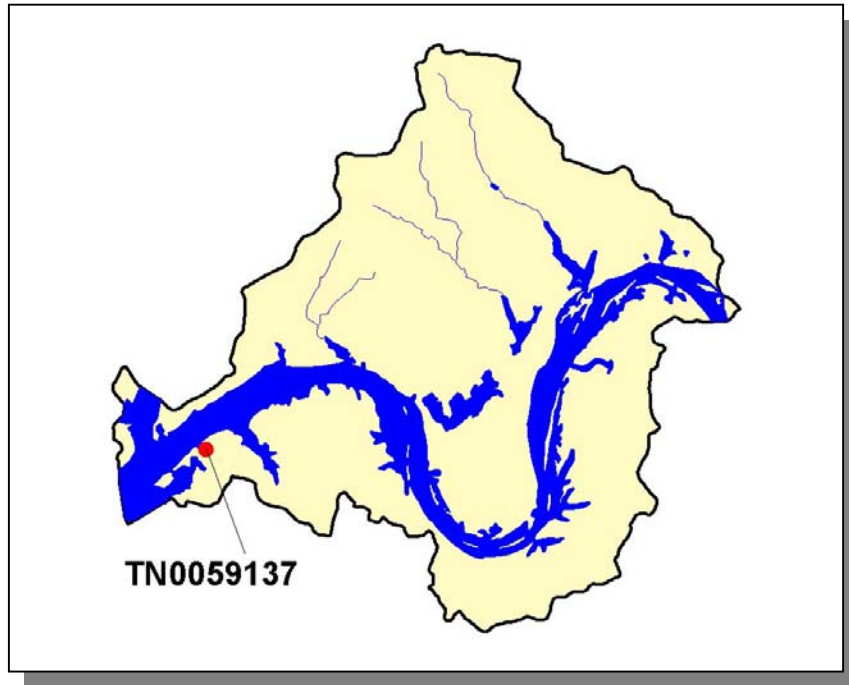


**Figure 4-101. Location of TMSP Sites in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.D.i.a.i. Dischargers to Water Bodies Listed on the 2004 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051302010401:

- TN0059137 (Boxwell Reservation) discharges to Spence Creek Embayment @ RM 1.0



**Figure 4-102. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0059137					

**Table 4-78. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	FLOW
TN0059137	X

**Table 4-79. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.**

PERMIT #	CBOD <sub>5</sub>	NH <sub>3</sub>	TRC	TSS	SETTLABLE SOLIDS	DO	pH
TN0059137	X		X	X	X	X	X

**Table 4-80. Inorganic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	<i>E. coli</i>	FECAL COLIFORM
TN0059137	X	X

**Table 4-81. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.**

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**4.2.D.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,055	2,087	67	<5	102	12

**Table 4-82. Summary of Livestock Count Estimates in Subwatershed 051302010401.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-83. Summary of Livestock Count Estimates in Sumner and Wilson Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

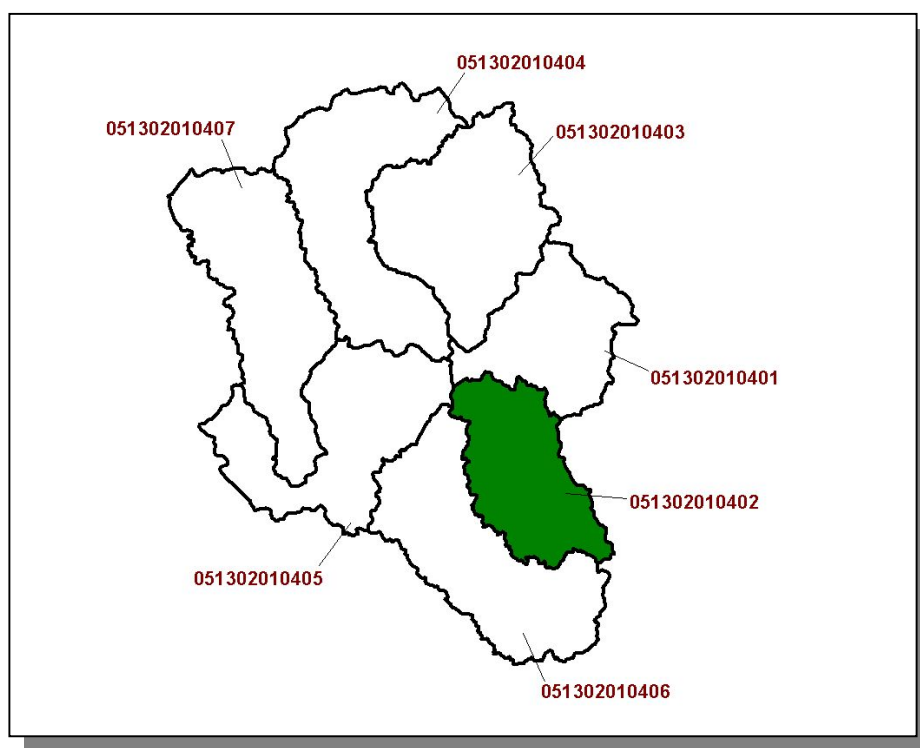
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

**Table 4-84. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner and Wilson Counties.**

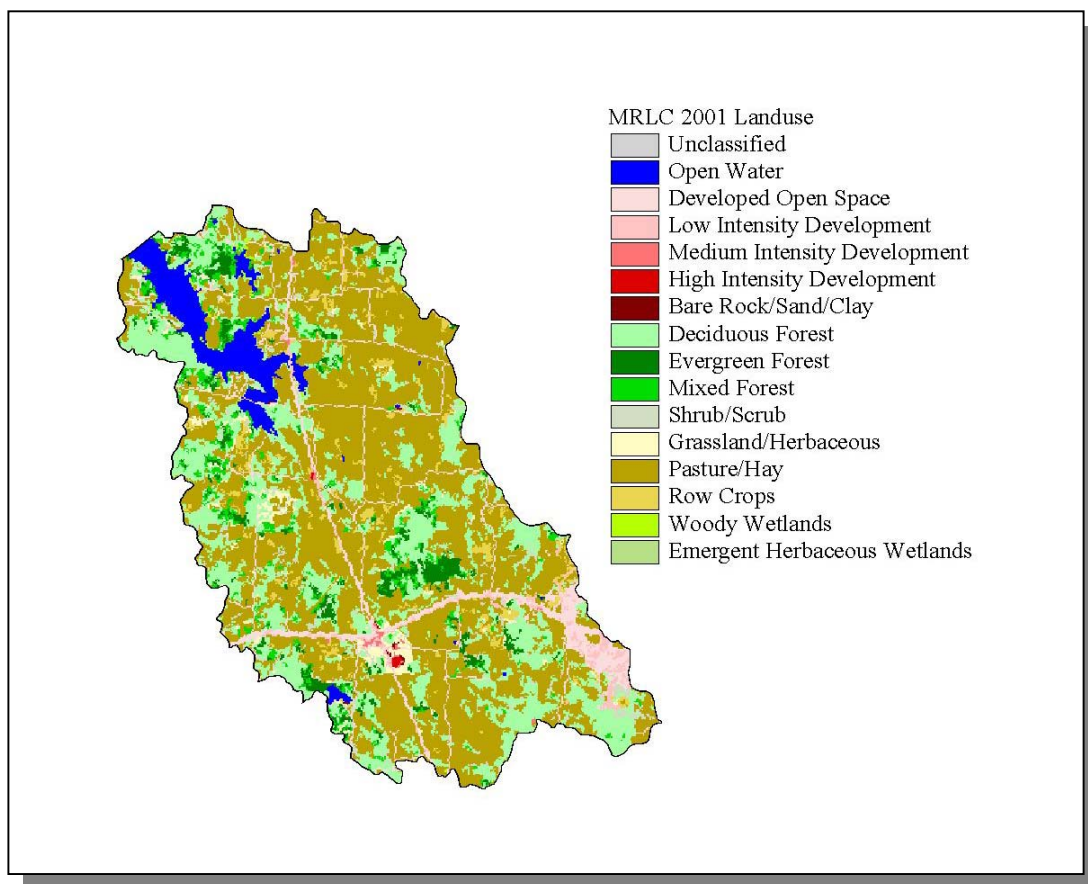
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.45
Grass (Hayland)	0.32
Legumes, Grass (Hayland)	0.26
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.62
Corn (Row Crops)	10.12
Soybeans (Row Crops)	10.28
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.97
All Other Close-Grown Cropland	2.49
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.32

**Table 4-85. Annual Estimated Total Soil Loss in Subwatershed 051302010401.**

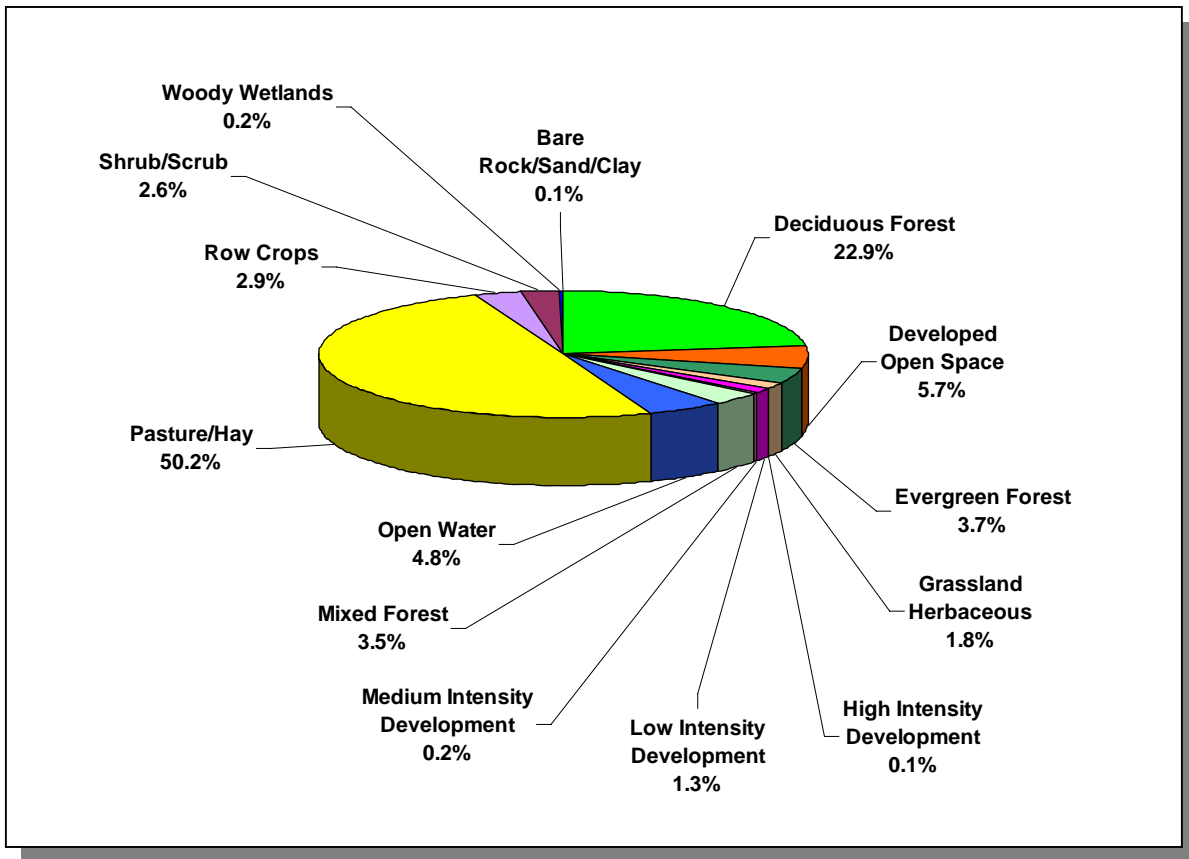
**4.2.D.ii.** 051302010402 (Spencer Creek).



**Figure 4-103. Location of Subwatershed 051302010402.** All HUC-12 subwatershed boundaries are shown for reference.



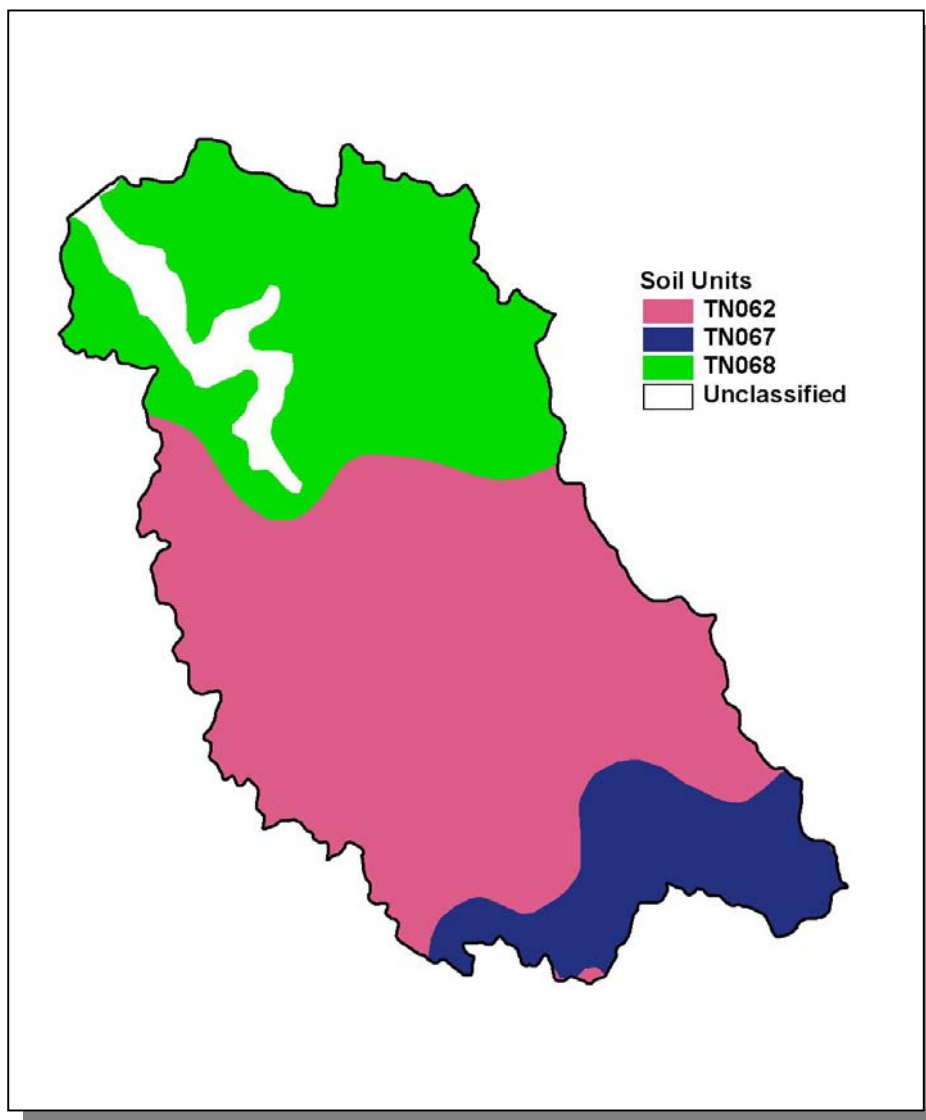
**Figure 4-104. Illustration of Land Use Distribution in Subwatershed 051302010402.**



**Figure 4-105. Land Use Distribution in Subwatershed 051302010402.** More information is provided in Appendix IV.



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**Figure 4-106. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010402.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37

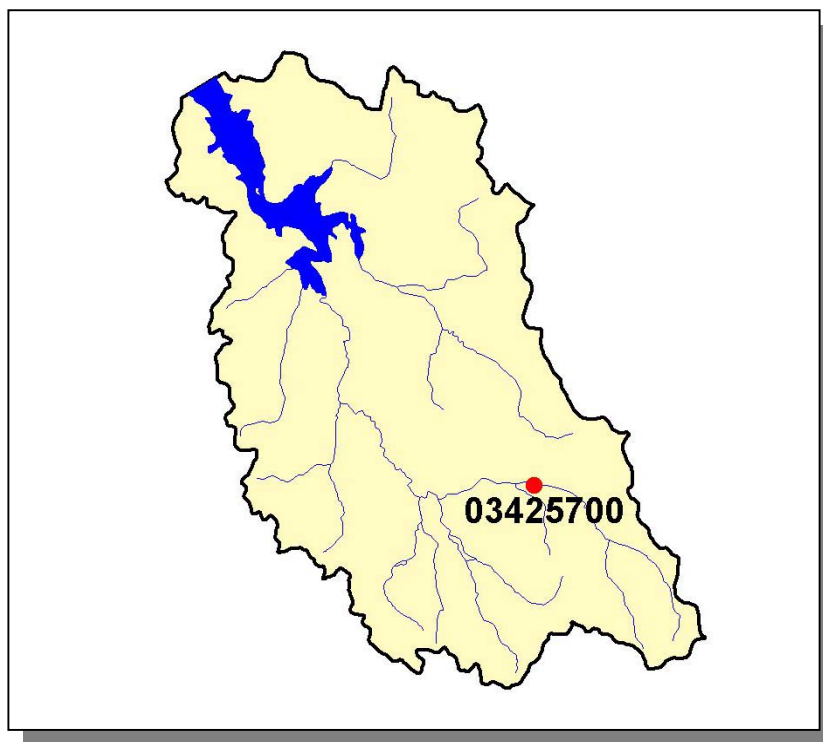
**Table 4-86. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010402.** The definition of “Hydrologic Group” is provided in Appendix IV.

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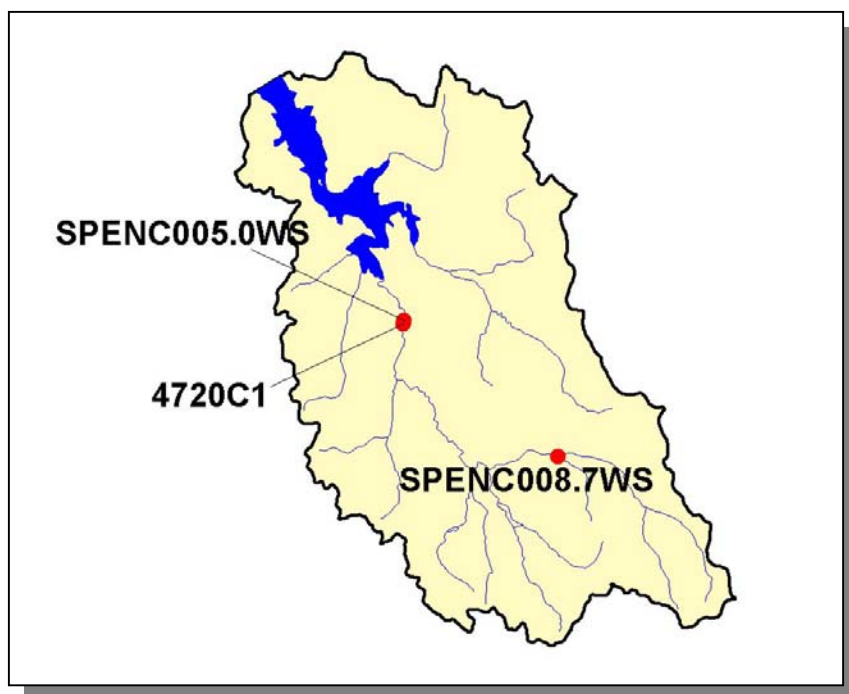
	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Overton								
Putnam								
<b>Total</b>								

*Table 4-87. Population Estimates in Subwatershed 051302010402.*

Sewage

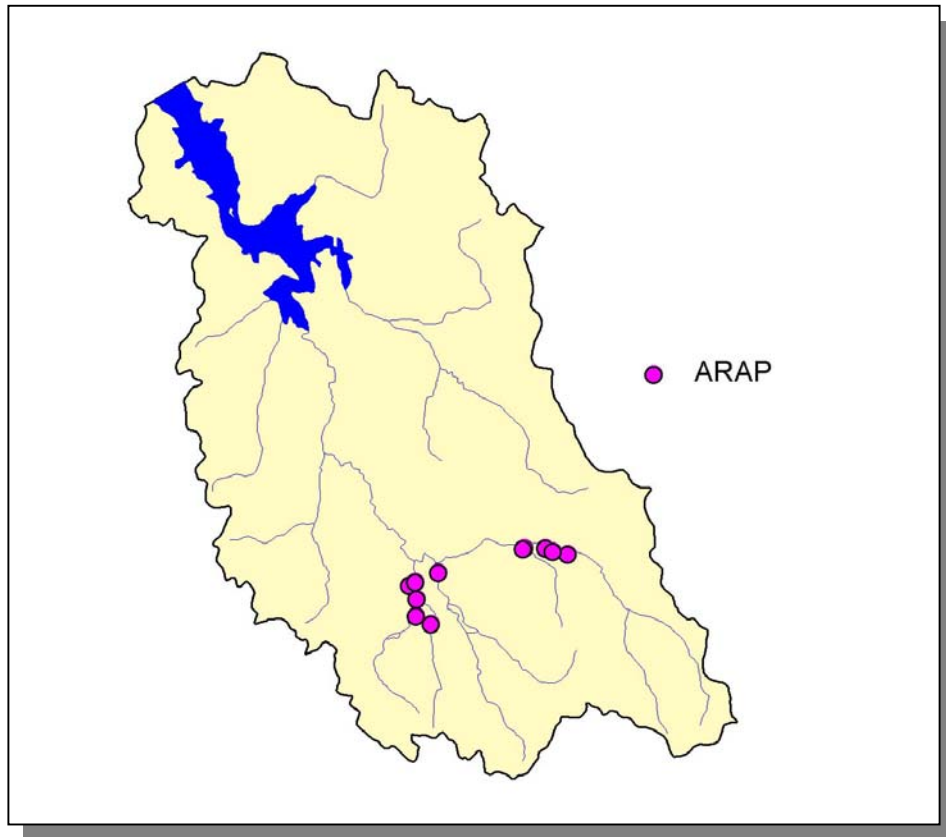


**Figure 4-107. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010402.** More information is provided in Appendix IV.

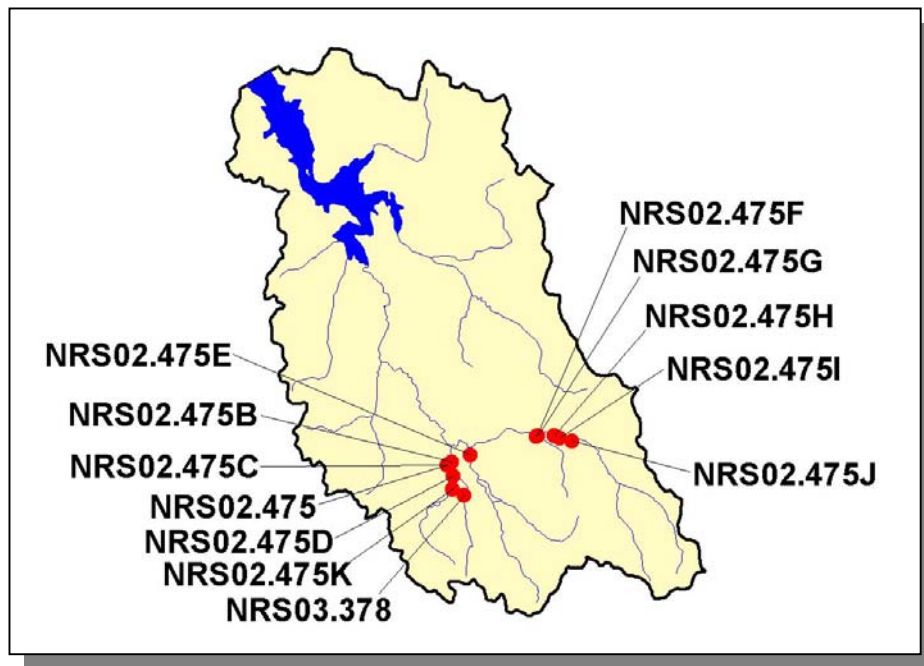


**Figure 4-108. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010402.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.ii.a. Point Source Contributions.**



**Figure 4-109. Location of Permits Issued in Subwatershed 051302010402.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-110. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010402. More information is provided in Appendix IV.**

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**4.2.D.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,971	3,701	109	6	123	34

**Table 4-88. Summary of Livestock Count Estimates in Subwatershed 051302010402.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-89. Summary of Livestock Count Estimates in Wilson County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

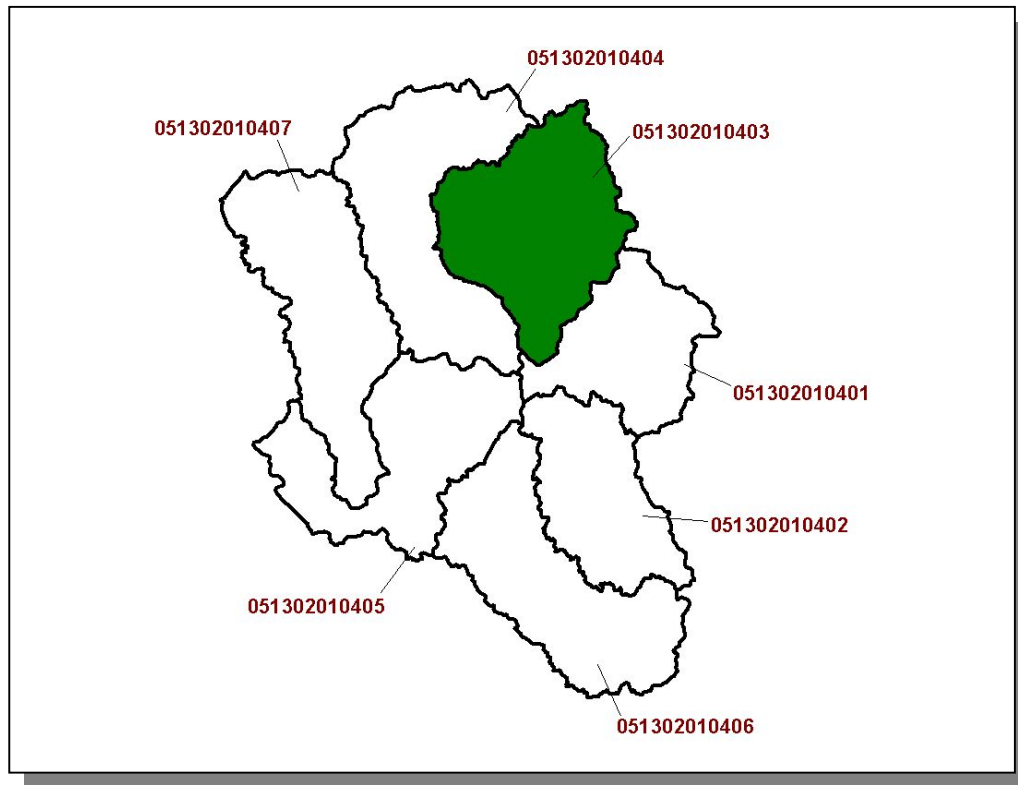
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Wilson	98.1	97.0	1.7	6.8

**Table 4-90. Forest Acreage and Annual Removal Rates (1987-1994) in Wilson County.**

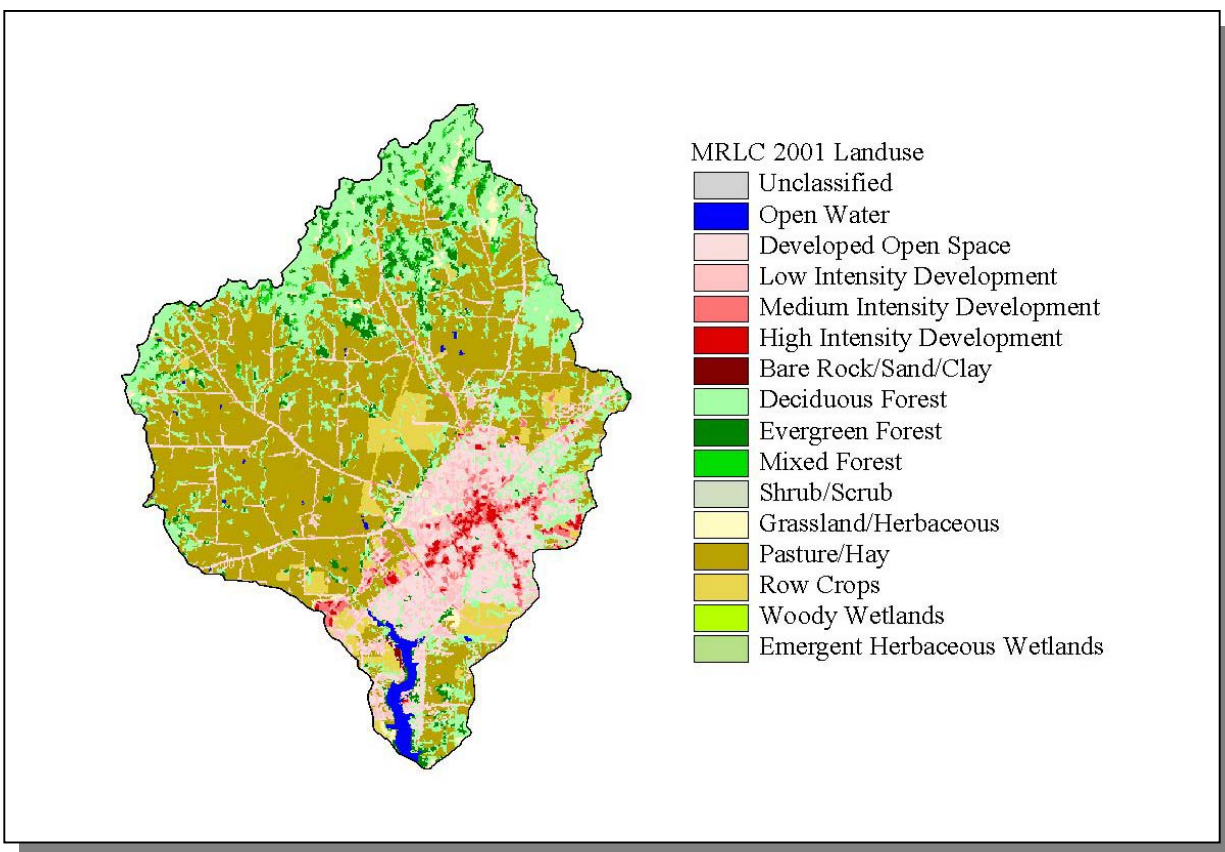
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.38
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.22
Soybeans (Row Crops)	6.72
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Farmsteads and Ranch Headquarters	0.26

**Table 4-91. Annual Estimated Total Soil Loss in Subwatershed 051302010402.**

**4.2.D.iii. 051302010403 (East Camp Creek).**



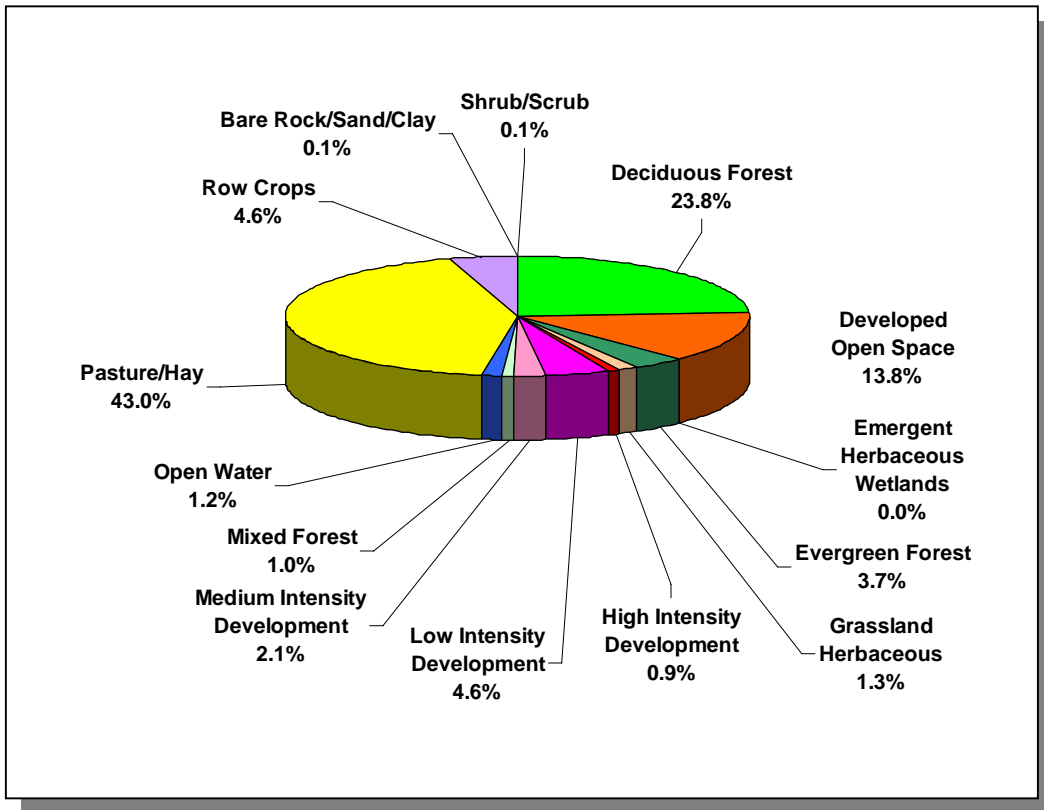
**Figure 4-111. Location of Subwatershed 051302010403.** All HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-112. Illustration of Land Use Distribution in Subwatershed 051302010403.**

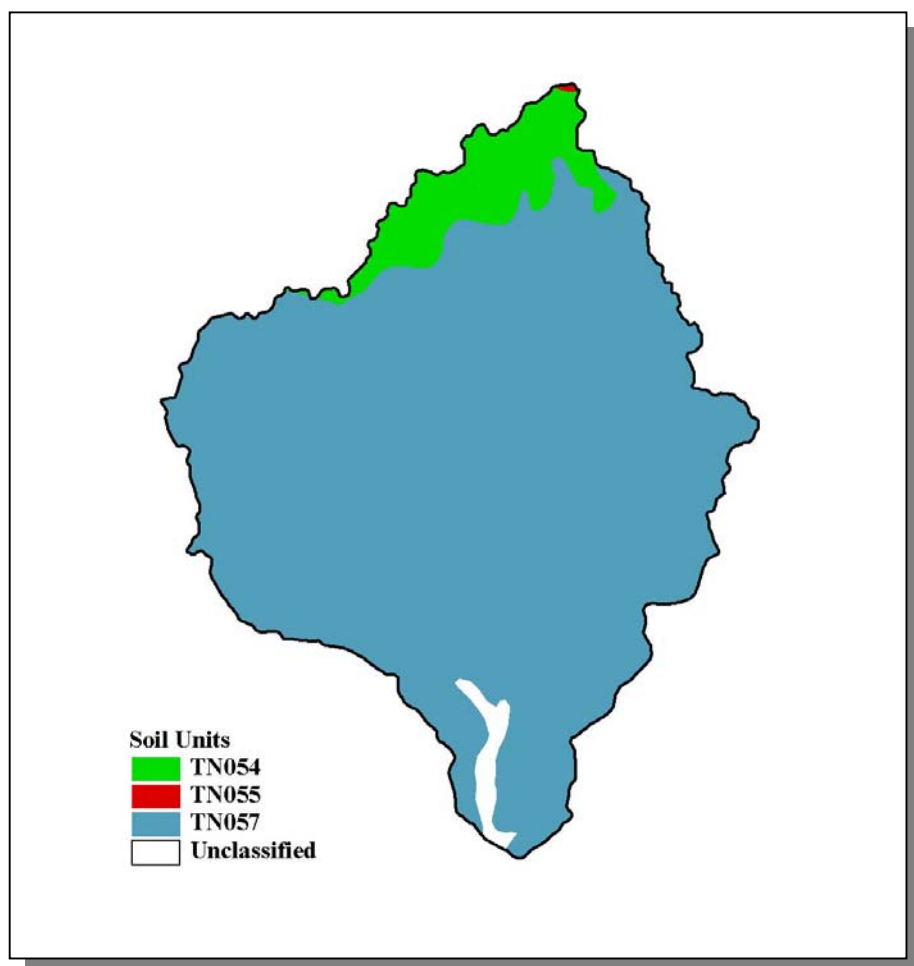


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**Figure 4-113. Land Use Distribution in Subwatershed 051302010403.** More information is provided in Appendix IV.

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**Figure 4-114. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010403.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	1.74
TN055	3.00	C	2.45	5.24	Loam	1.80
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33

**Table 4-92. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010403.** The definition of "Hydrologic Group" is provided in Appendix IV.

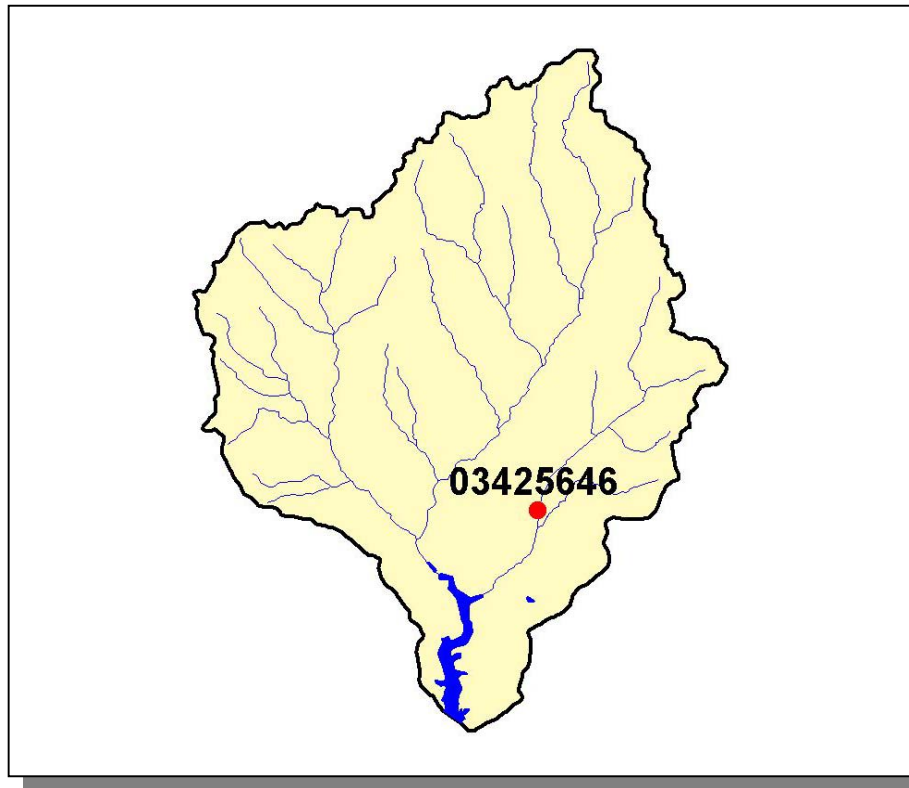
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	8.24	8,508	10,044	10,746	26.3

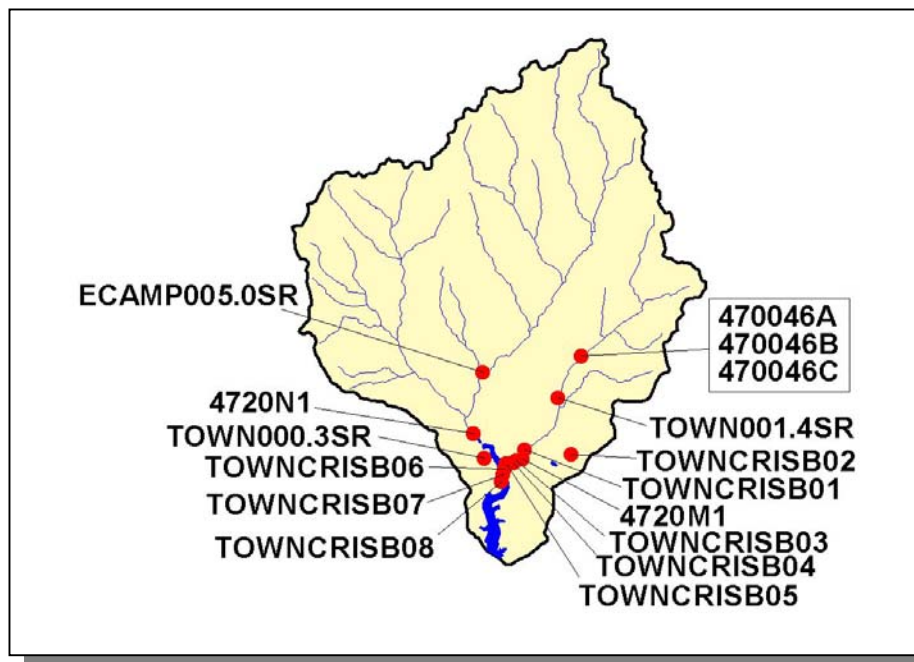
**Table 4-93. Population Estimates in Subwatershed 051302010403.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	18,794	7,635	6,931	704	0

**Table 4-94. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010403.**

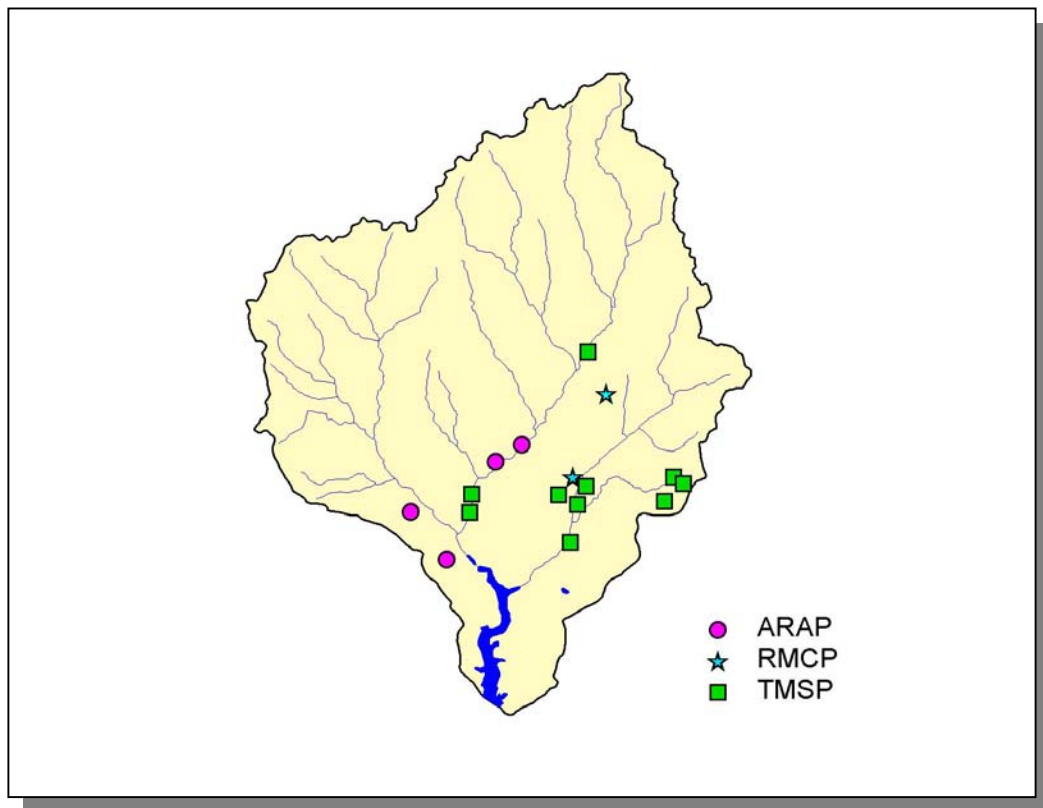


**Figure 4-115. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010403.** More information is provided in Appendix IV.

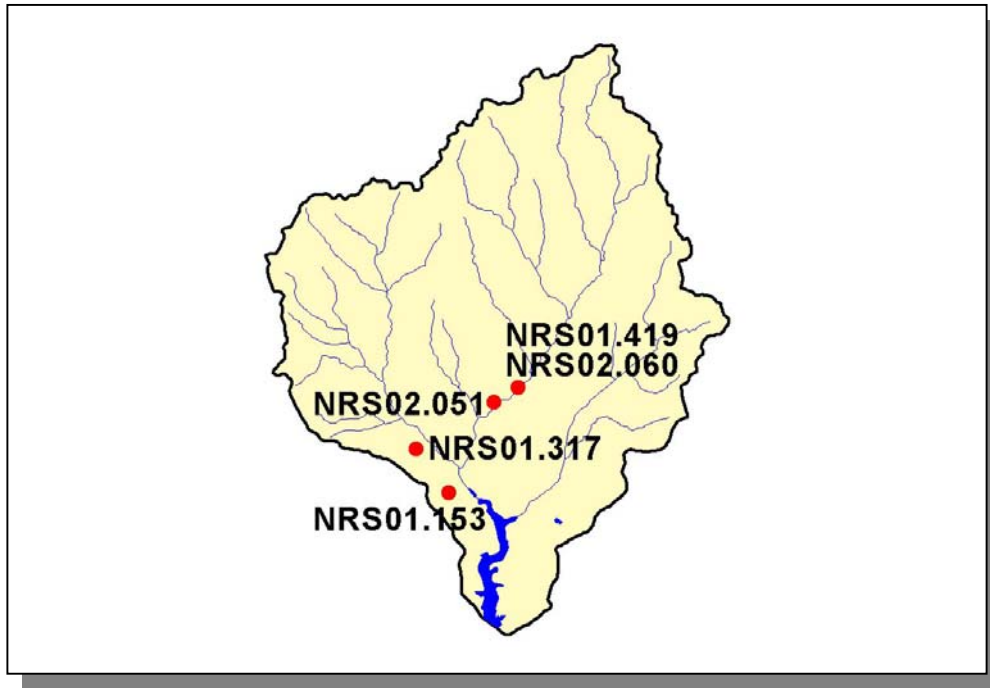


**Figure 4-116. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010403.** More information, including site names and locations, is provided in Appendix IV.

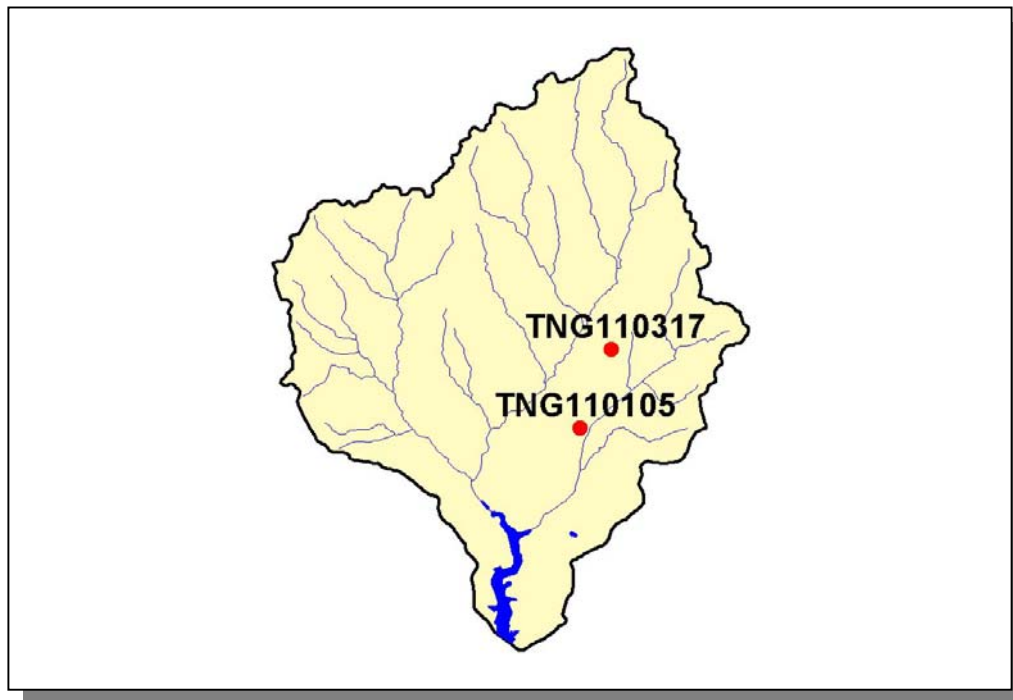
**4.2.D.iii.a. Point Source Contributions.**



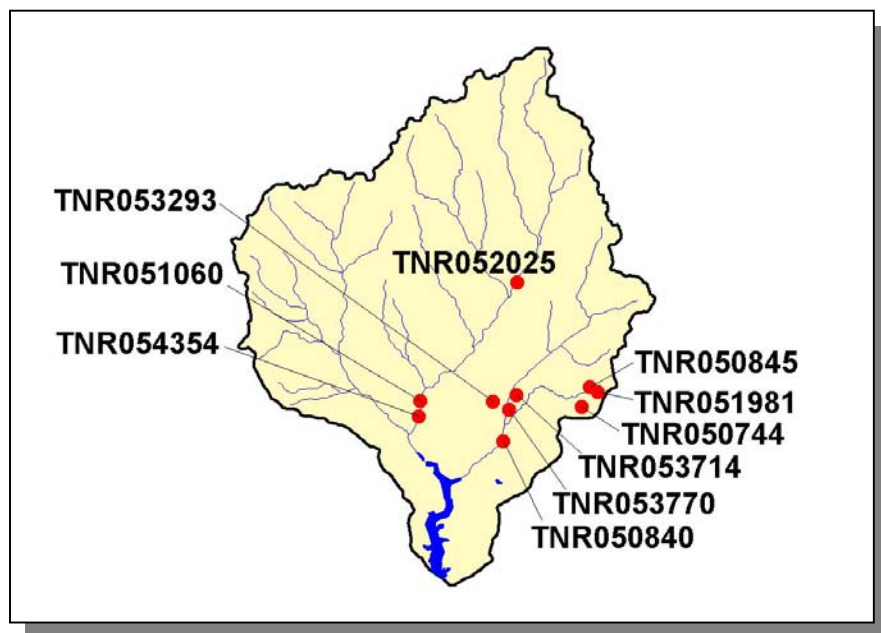
**Figure 4-117. Location of Permits Issued in Subwatershed 051302010403.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-118. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010403. More information is provided in Appendix IV.**



**Figure 4-119. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010403. More information is provided in Appendix IV.**



**Figure 4-120. Location of TMSP Sites in Subwatershed 051302010403.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.D.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,628	5,804	195	6	322	24

**Table 4-95. Summary of Livestock Count Estimates in Subwatershed 051302010403.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189

**Table 4-96. Summary of Livestock Count Estimates in Sumner County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3

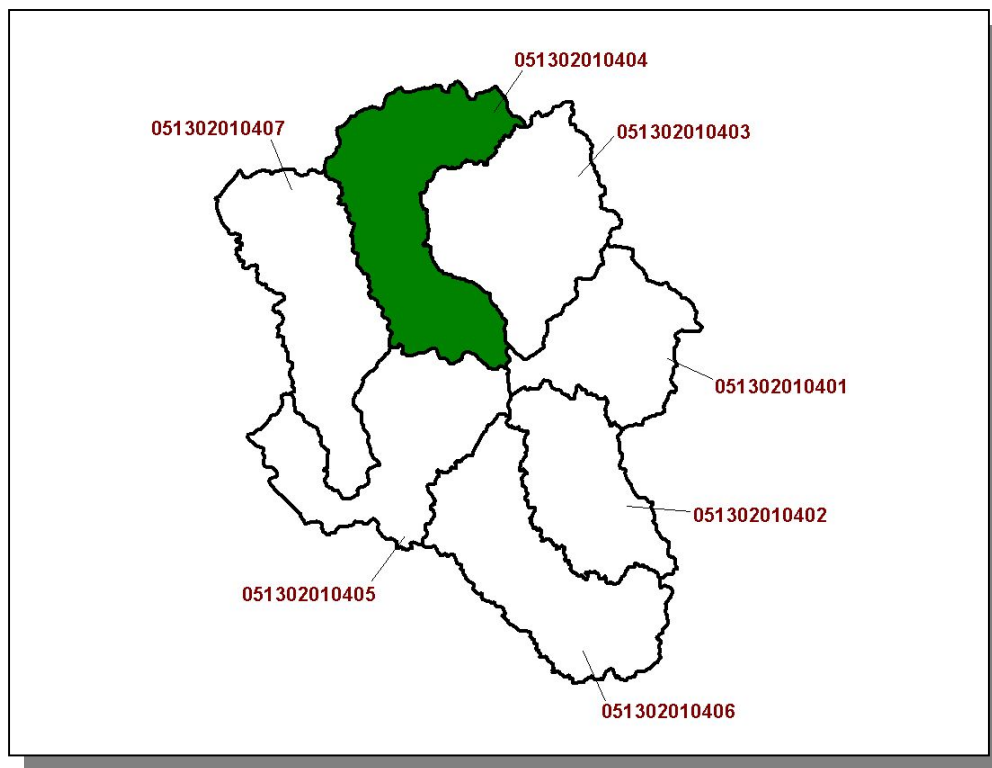
**Table 4-97. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner County.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.34

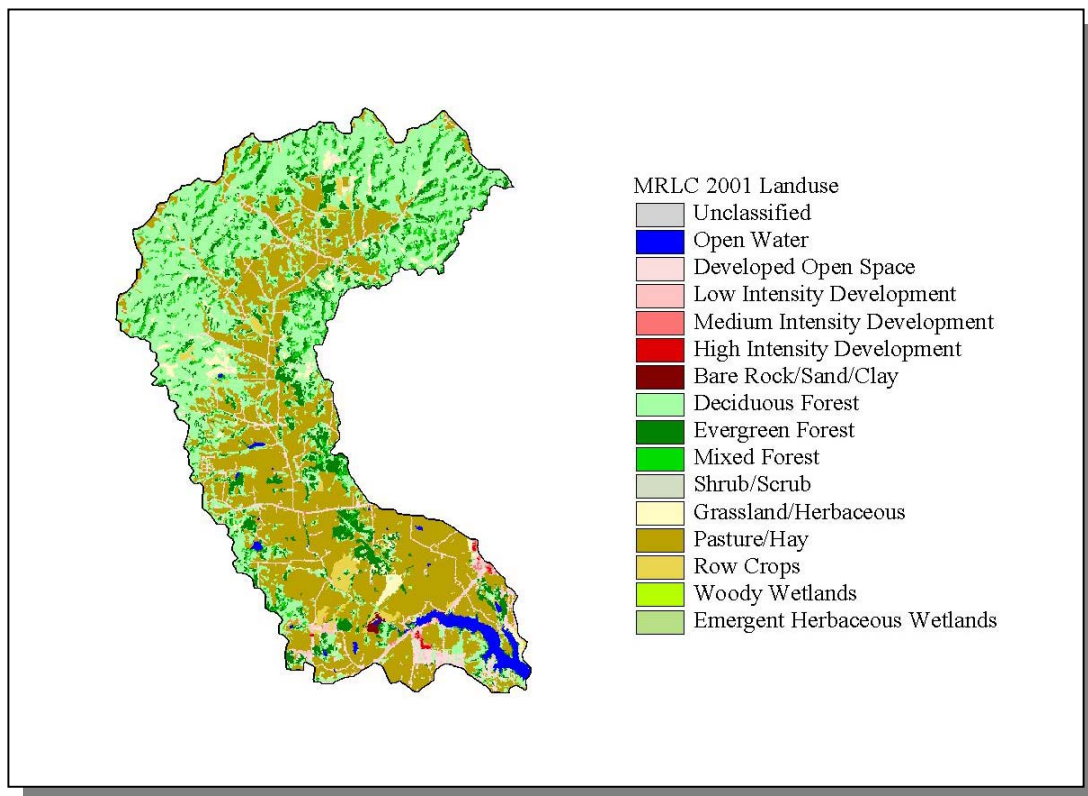
**Table 4-98. Annual Estimated Total Soil Loss in Subwatershed 051302010403.**



**4.2.D.iv. 051302010404 (Station Camp Creek).**

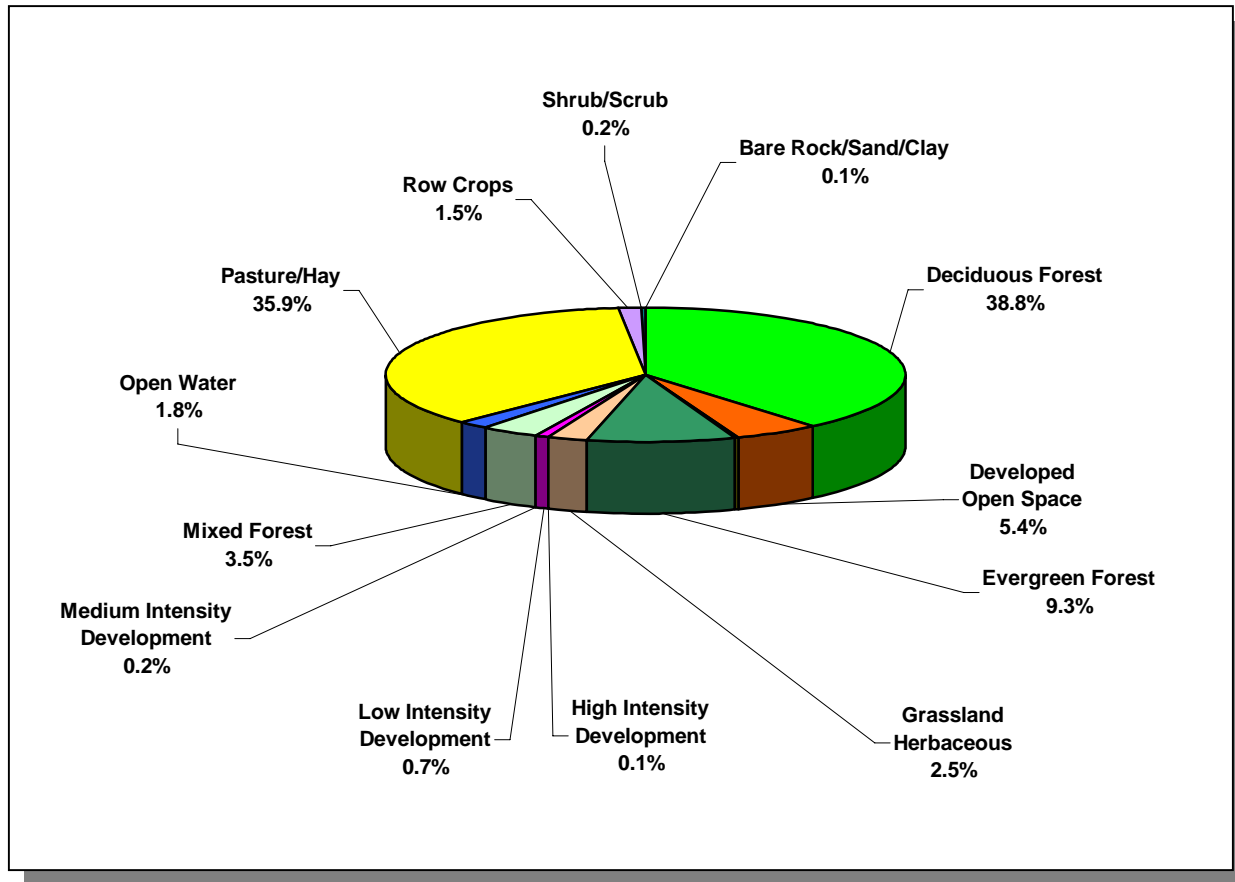


**Figure 4-121. Location of Subwatershed 051302010404.** All HUC-12 subwatershed boundaries are shown for reference.



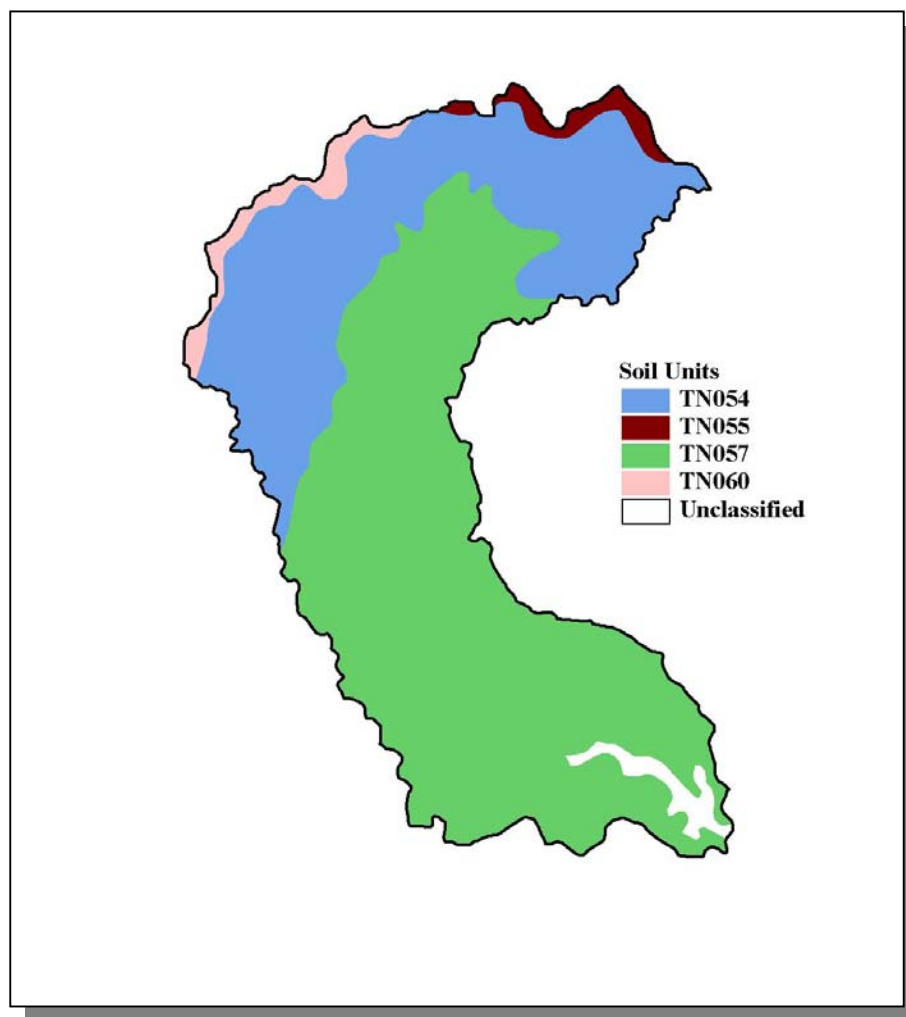
**Figure 4-122. Illustration of Land Use Distribution in Subwatershed 051302010404.**

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**Figure 4-123. Land Use Distribution in Subwatershed 051302010404.** More information is provided in Appendix IV.

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**Figure 4-124. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010404.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN055	3.00	C	2.45	5.24	Loam	0.34
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

**Table 4-99. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010404.** The definition of "Hydrologic Group" is provided in Appendix IV.

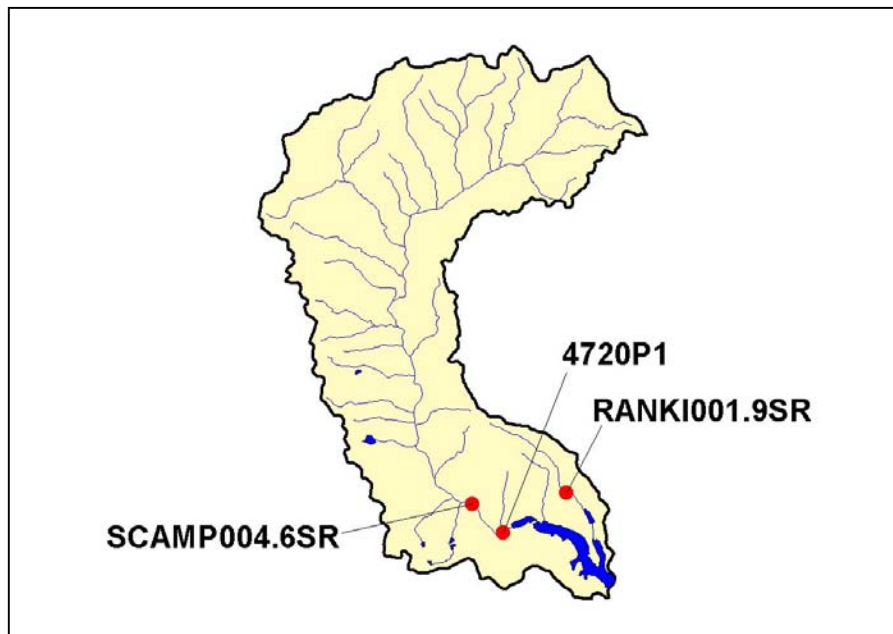
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	8.64	8,926	10,539	11,275	26.3

**Table 4-100. Population Estimates in Subwatershed 051302010404.**

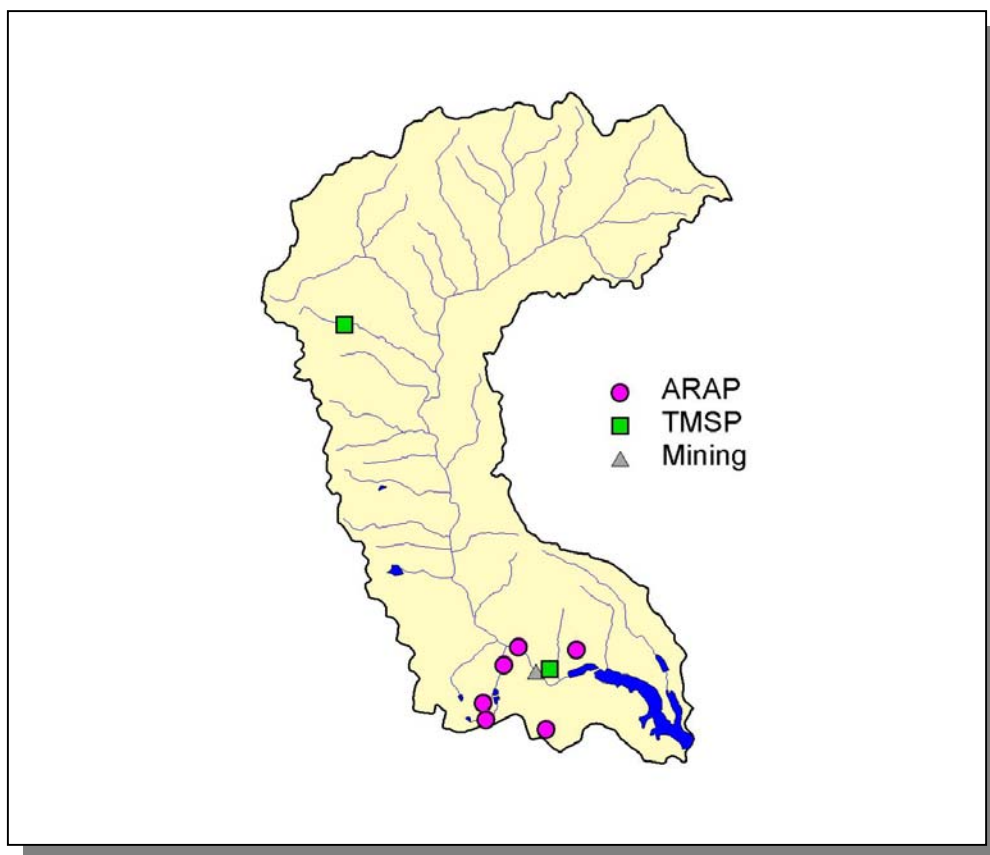
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	18,794	7,635	6,931	704	0
Hendersonville	Sumner	32,188	12,472	8,395	4,069	8
<b>Total</b>		<b>50,982</b>	<b>20,107</b>	<b>15,326</b>	<b>4,773</b>	<b>8</b>

**Table 4-101. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010404.**

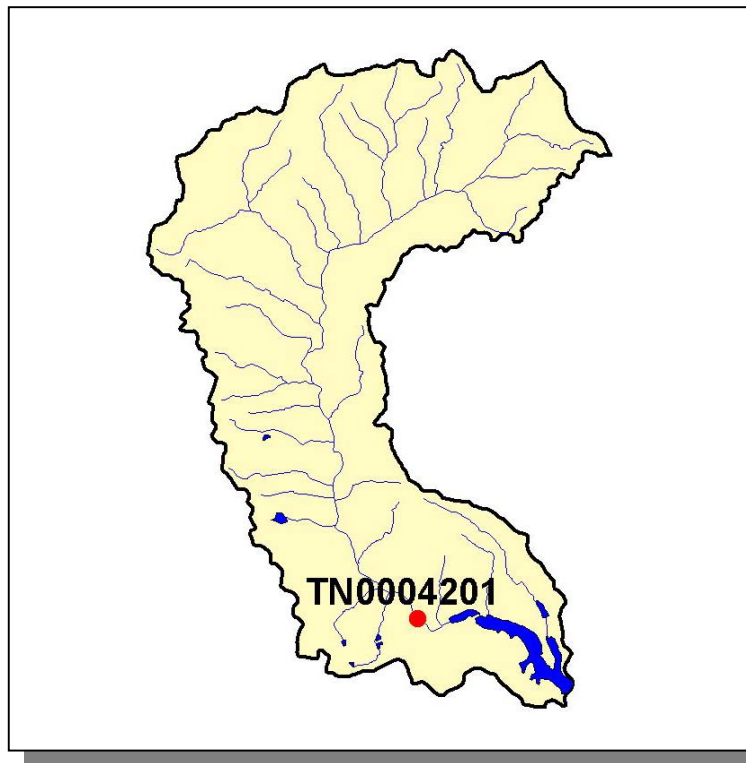


**Figure 4-125. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010404.** More information, including site names and locations, is provided in Appendix IV.

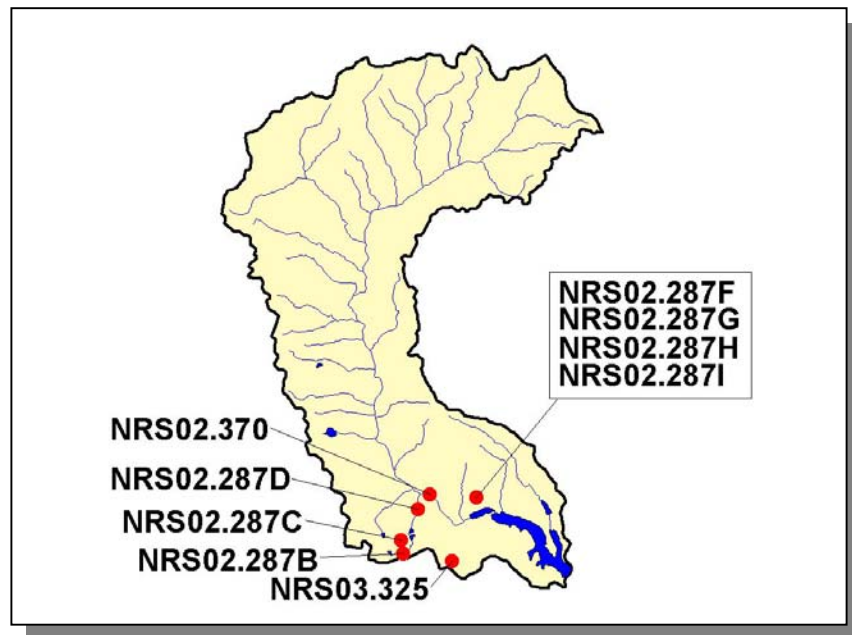
**4.2.D.iv.a. Point Source Contributions.**



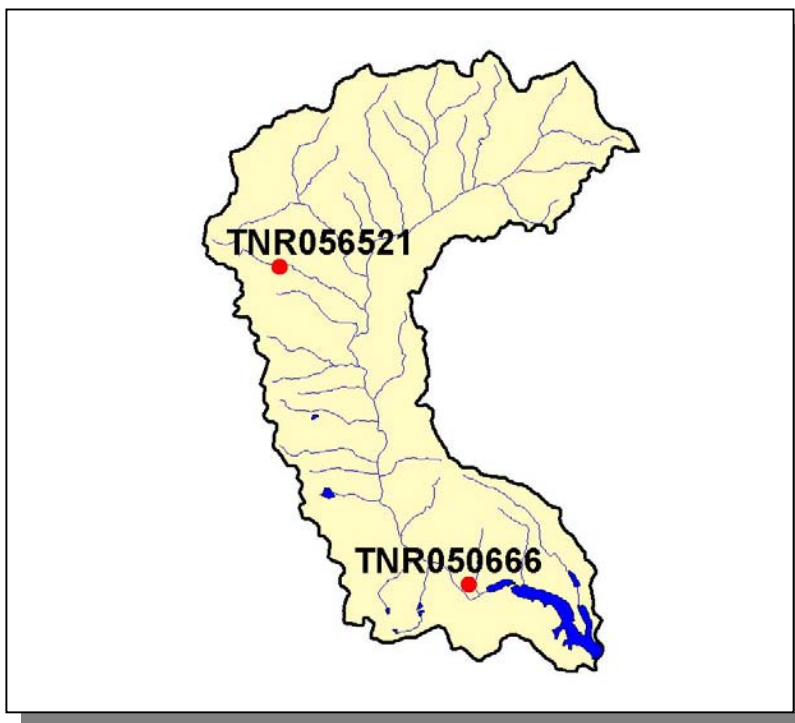
**Figure 4-126. Location of Permits Issued in Subwatershed 051302010404.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-127. Location of Active Mining Sites in Subwatershed 051302010404.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-128. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010404.** More information is provided in Appendix IV.



**Figure 4-129. Location of TMSP Sites in Subwatershed 051302010404.** More information, including the names of facilities, is provided in Appendix IV.



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**4.2.D.iv.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,454	4,967	167	6	275	21

**Table 4-102. Summary of Livestock Count Estimates in Subwatershed 051302010404.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189

**Table 4-103. Summary of Livestock Count Estimates in Sumner County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

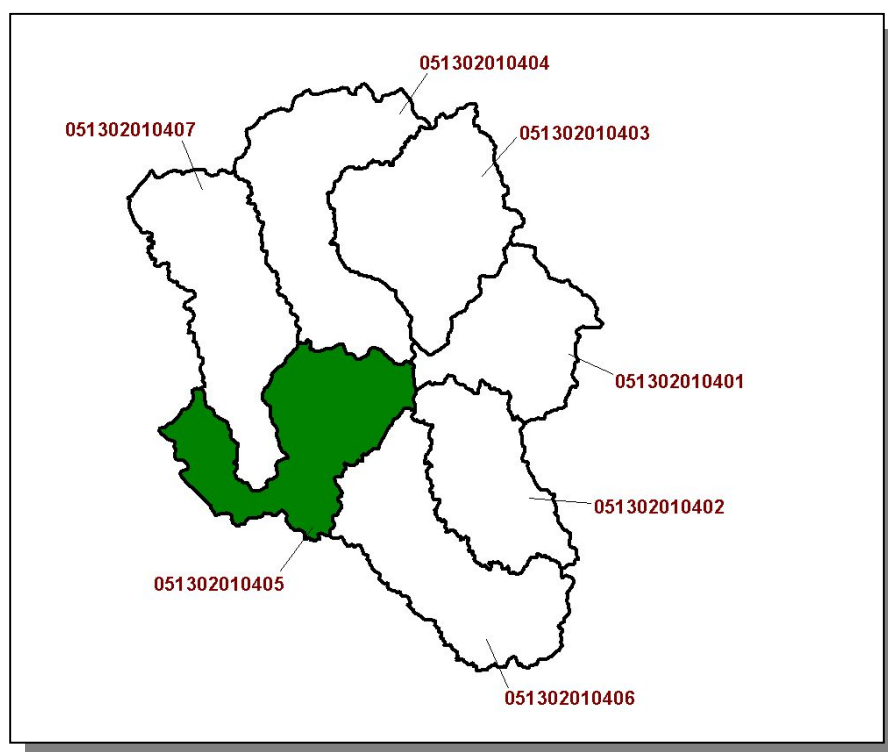
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3

**Table 4-104. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner County.**

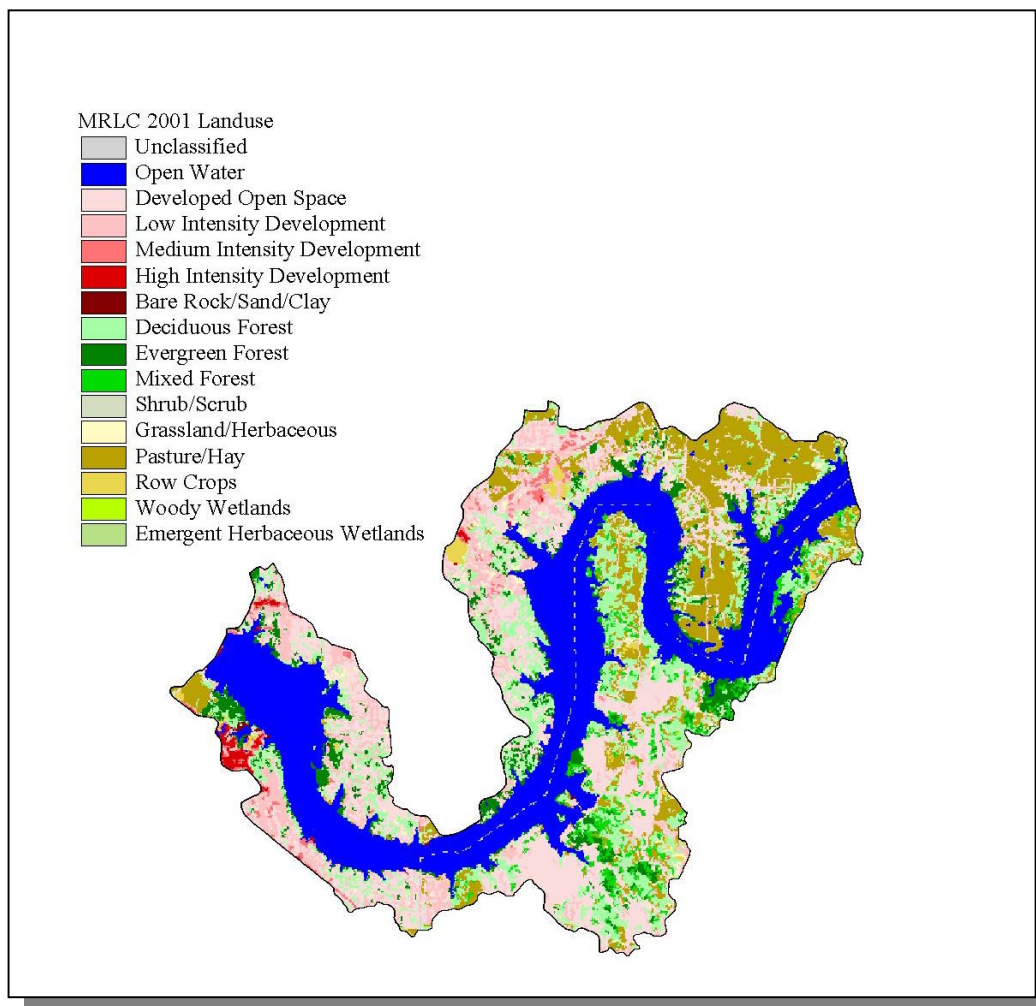
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.34

**Table 4-105. Annual Estimated Total Soil Loss in Subwatershed 051302010404.**

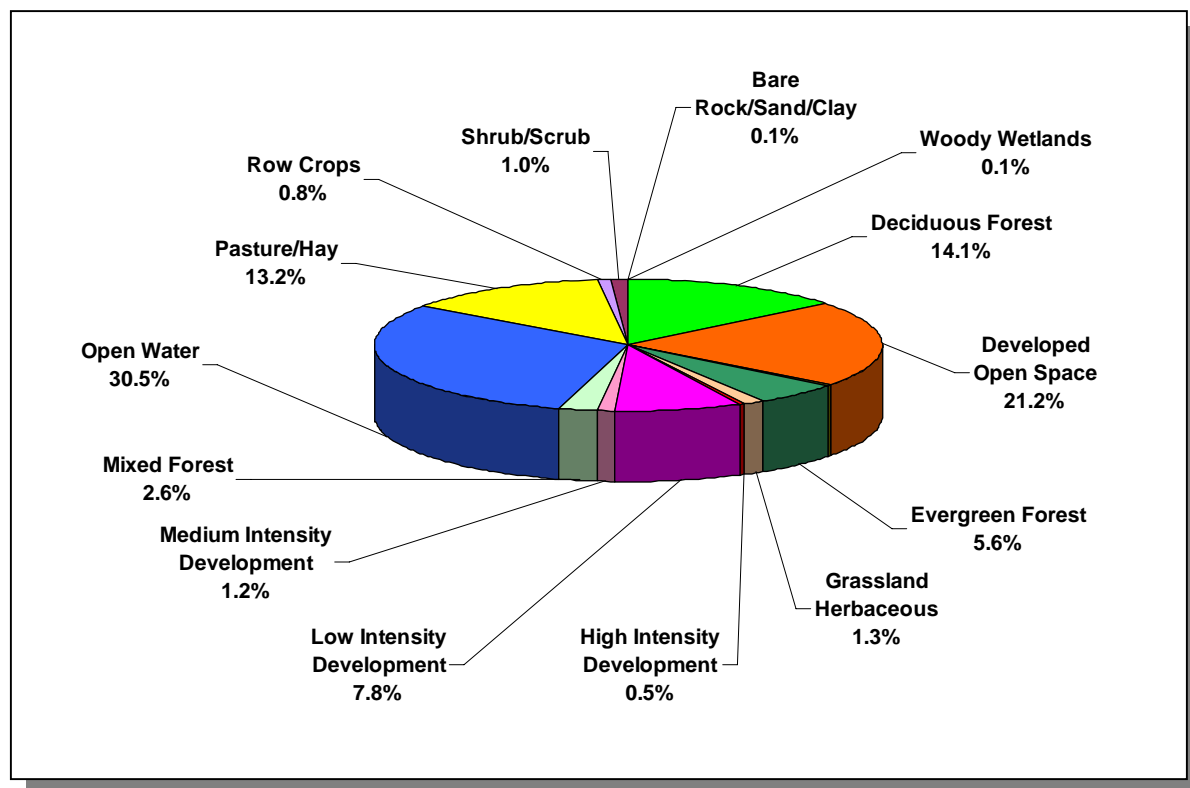
**4.2.D.v. 051302010405 (Cumberland River).**



**Figure 4-130. Location of Subwatershed 051302010405.** All HUC-12 subwatershed boundaries are shown for reference.

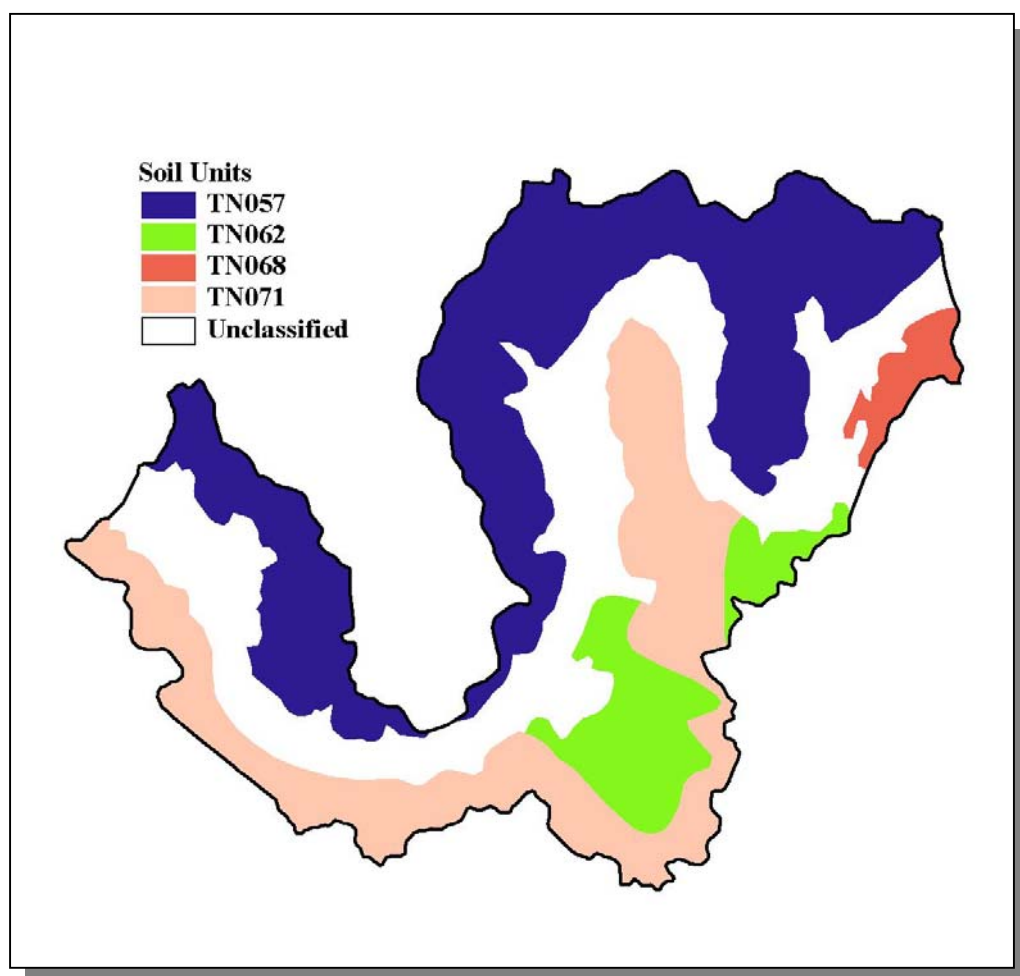


**Figure 4-131. Illustration of Land Use Distribution in Subwatershed 051302010405.**



**Figure 4-132. Land Use Distribution in Subwatershed 051302010405.** More information is provided in Appendix IV.

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**Figure 4-133. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010405.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN068	0.00	B	1.35	5.38	Silty Loam	0.37
TN071	0.00	C	2.37	5.70	Silty Loam	0.33

**Table 4-106. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010405.** The definition of "Hydrologic Group" is provided in Appendix IV.

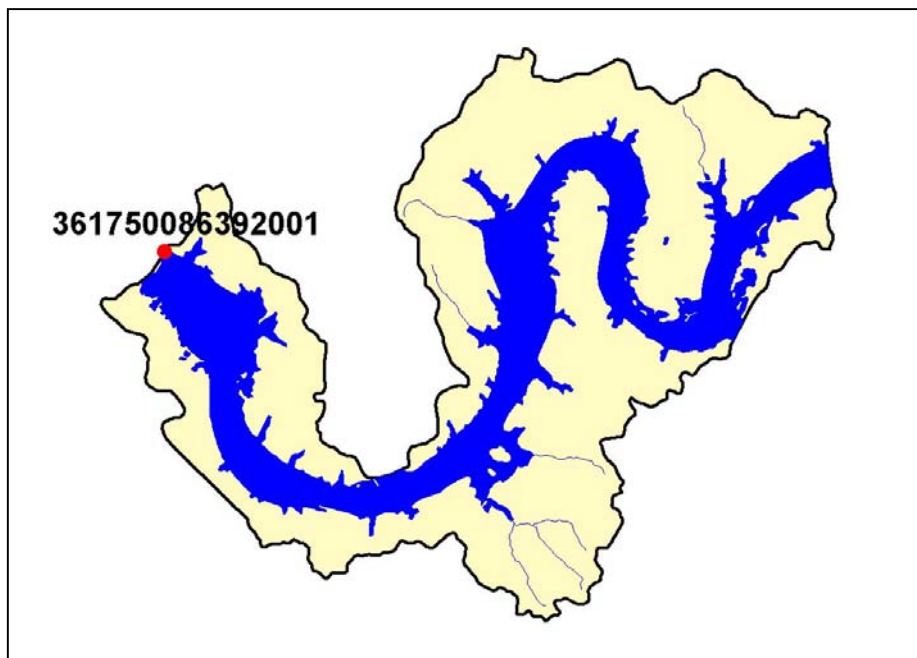
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Davidson	510,784	535,032	569,891	1.04	5,289	5,540	5,901	11.6
Sumner	103,281	121,936	130,449	4.45	4,599	5,429	5,808	26.3
<b>Total</b>	<b>614,065</b>	<b>656,968</b>	<b>700,340</b>		<b>9,888</b>	<b>10,969</b>	<b>11,709</b>	<b>18.4</b>

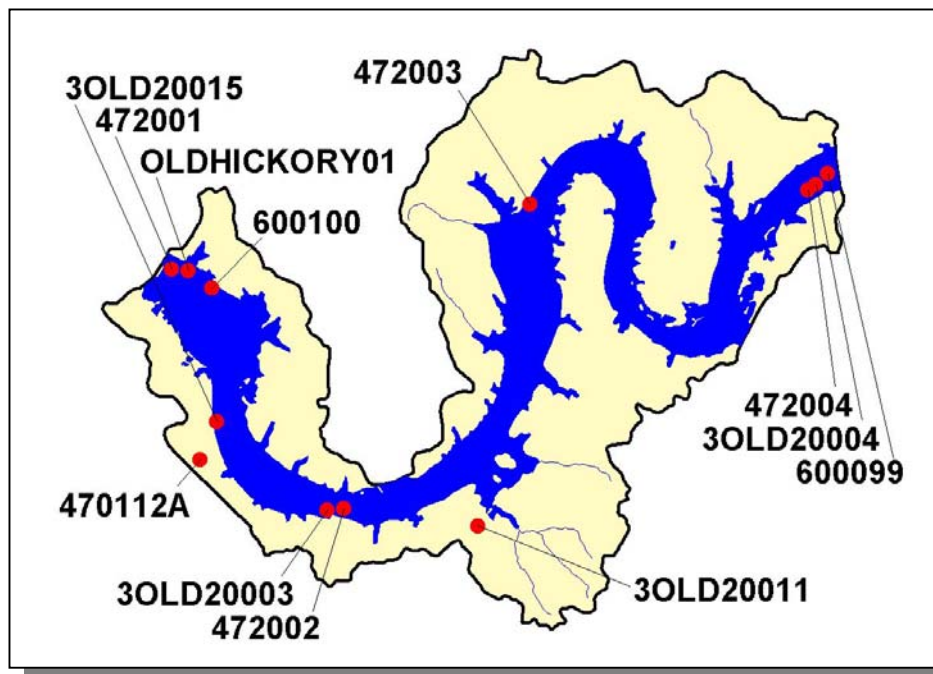
*Table 4-107. Population Estimates in Subwatershed 051302010405.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Mount Juliet	Wilson	5,389	1,926	1,265	661	0
Gallatin	Sumner	18,794	7,635	6,931	704	0
Hendersonville	Sumner	32,188	12,472	8,395	4,069	8
Lakewood	Davidson	1,867	830	582	248	0
Nashville (Remainder)	Davidson	488,518	219,521	203,640	15,576	305
<b>Total</b>		<b>546,756</b>	<b>242,384</b>	<b>220,813</b>	<b>21,258</b>	<b>313</b>

*Table 4-108. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010405.*

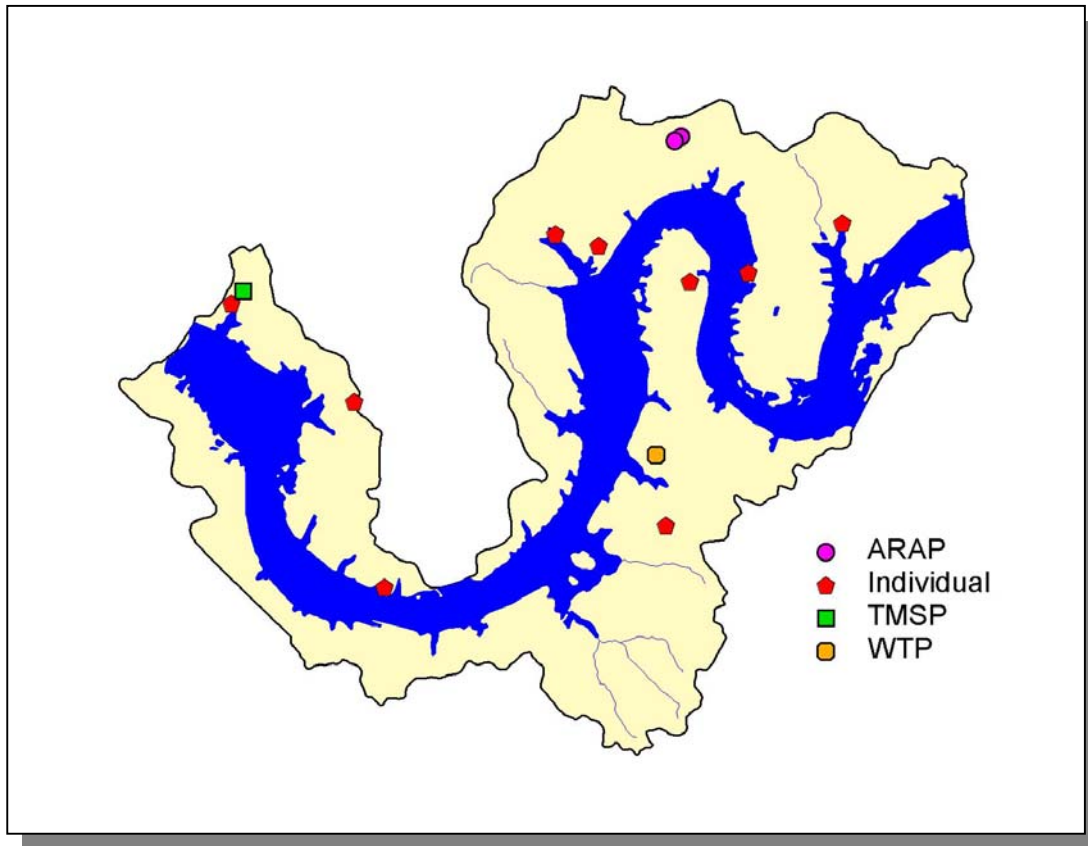


**Figure 4-134. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010405.** More information is provided in Appendix IV.



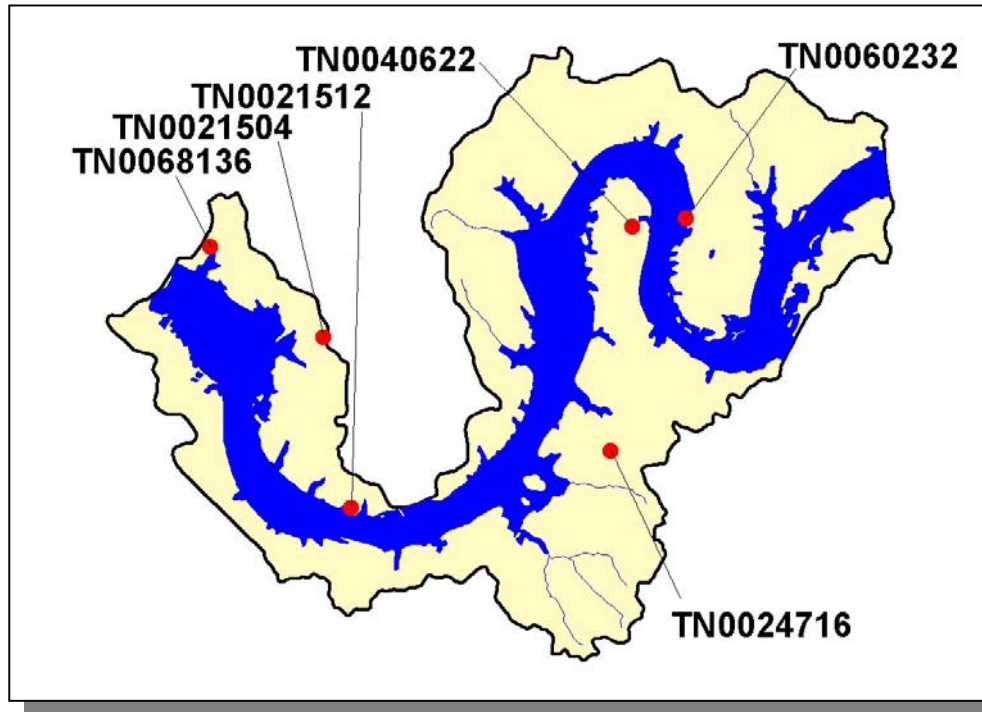
**Figure 4-135. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010405.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.v.a. Point Source Contributions.**

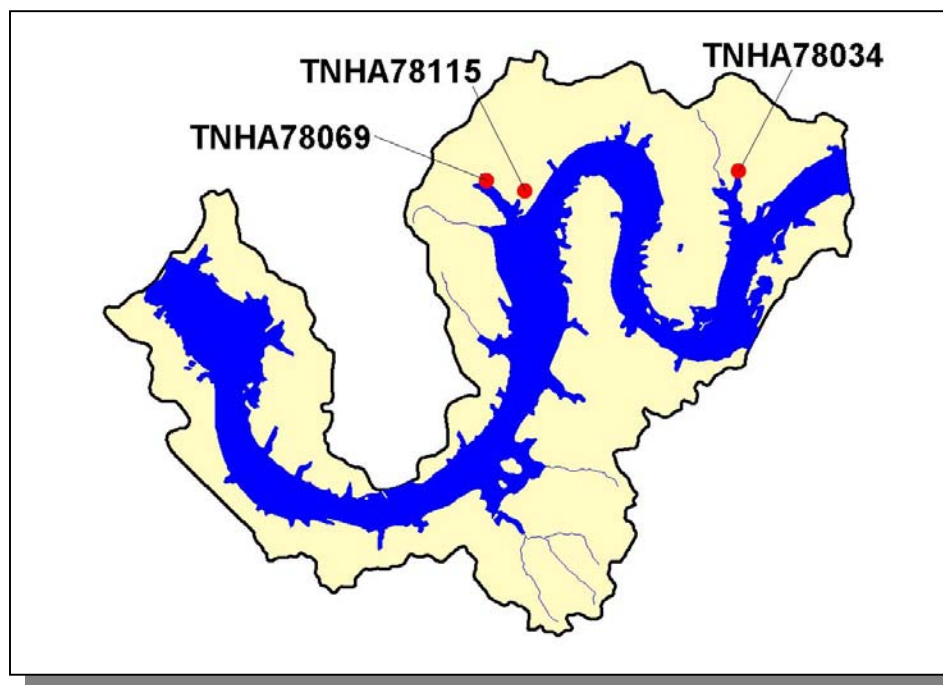


**Figure 4-136. Location of Permits Issued in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.

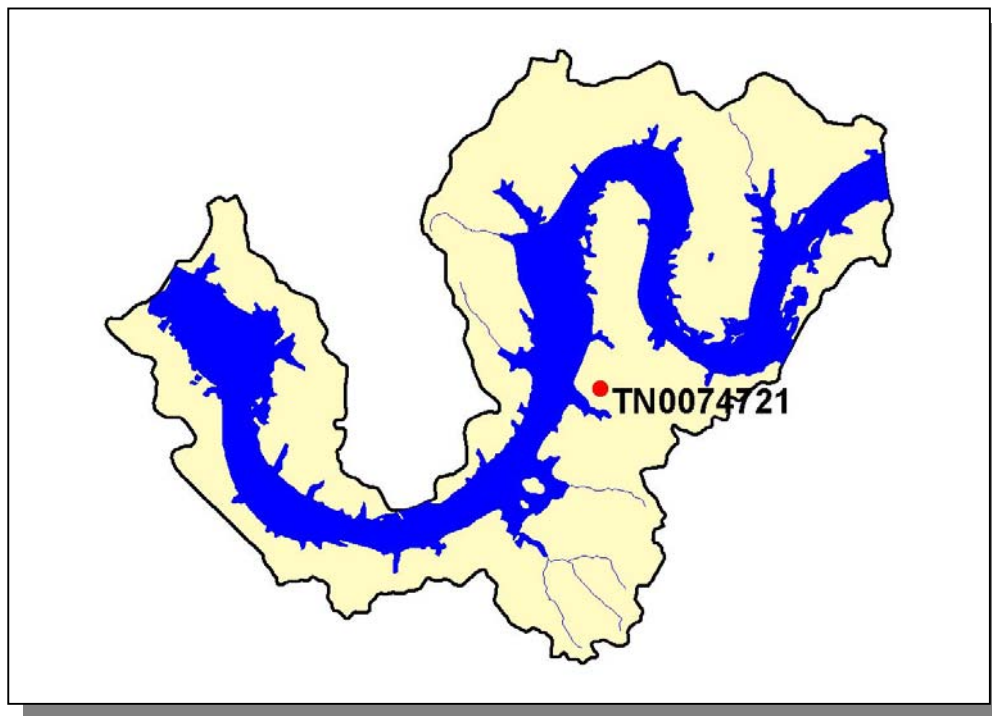




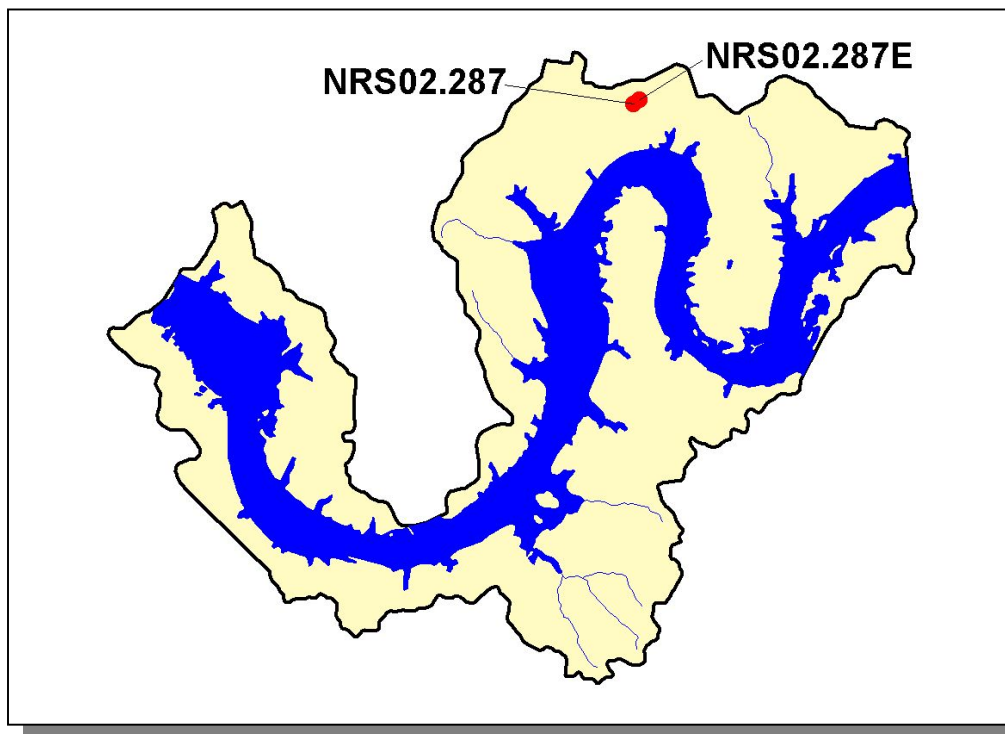
**Figure 4-137. Location of Active NPDES Sites in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.



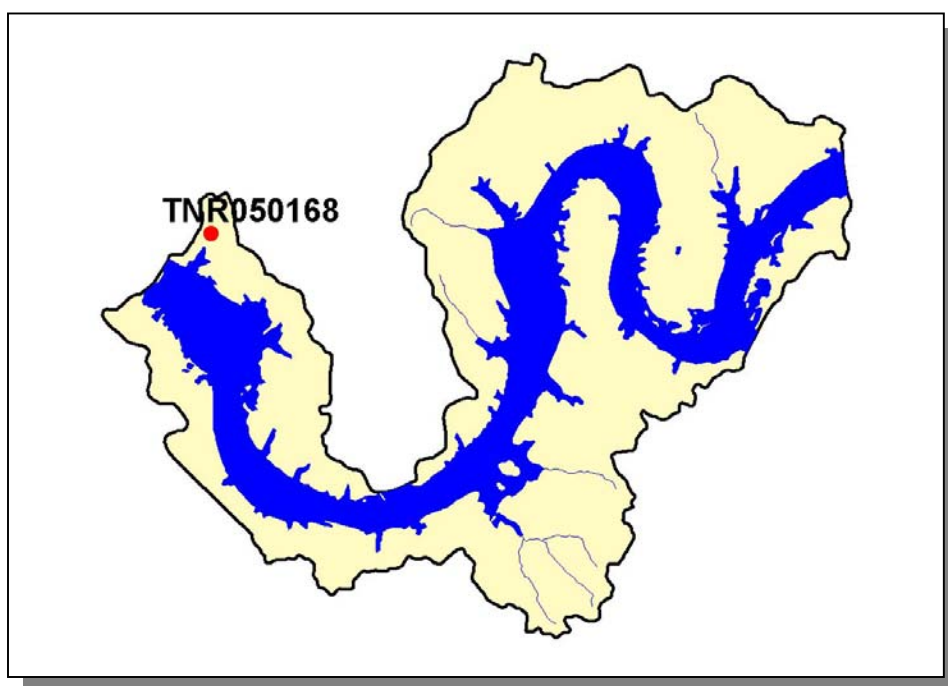
**Figure 4-138. Location of Permitted Herbicide Application Sites in Subwatershed 051302010405.** More information is provided in Appendix IV.



**Figure 4-139. Location of Water Treatment Plants in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-140. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010405.** More information is provided in Appendix IV.



**Figure 4-141. Location of TMSP Sites in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.D.v.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
807	1,762	51	<5	78	9

**Table 4-109. Summary of Livestock Count Estimates in Subwatershed 051302010405.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Davidson	0	9,207	0	1,572	73	0
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-110. Summary of Livestock Count Estimates in Davidson, Sumner and Wilson Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Davidson	108.7	108.1	2.3	9.7
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

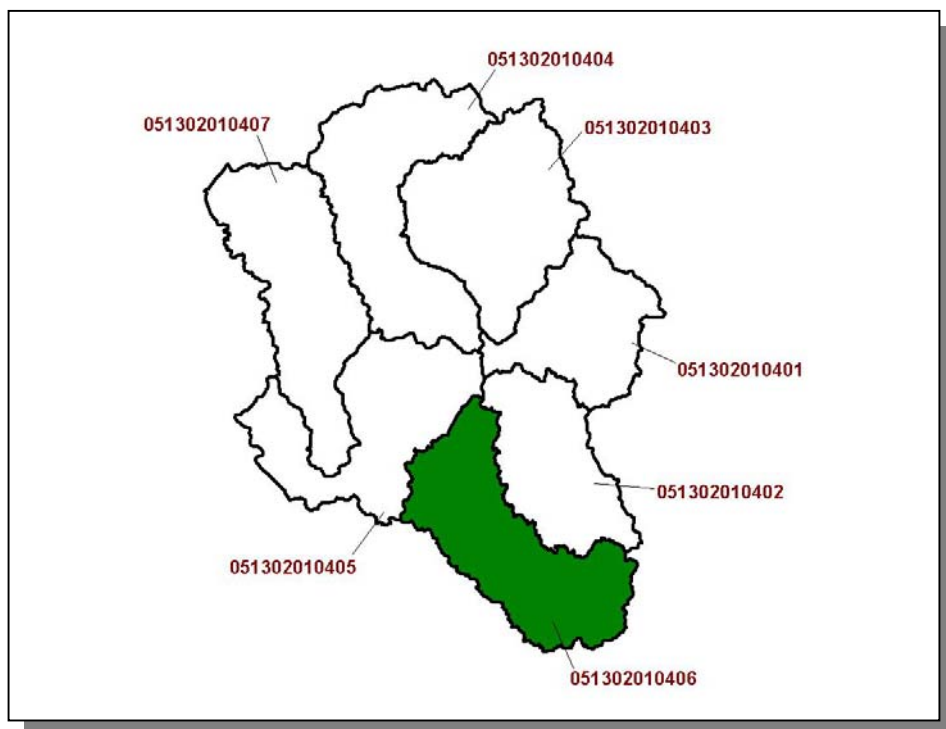
**Table 4-111. Forest Acreage and Annual Removal Rates (1987-1994) in Davidson, Sumner, and Wilson Counties.**

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<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.45
Grass (Hayland)	0.30
Legumes, Grass (Hayland)	0.28
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.64
Corn (Row Crops)	9.13
Soybeans (Row Crops)	10.51
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.42
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.32

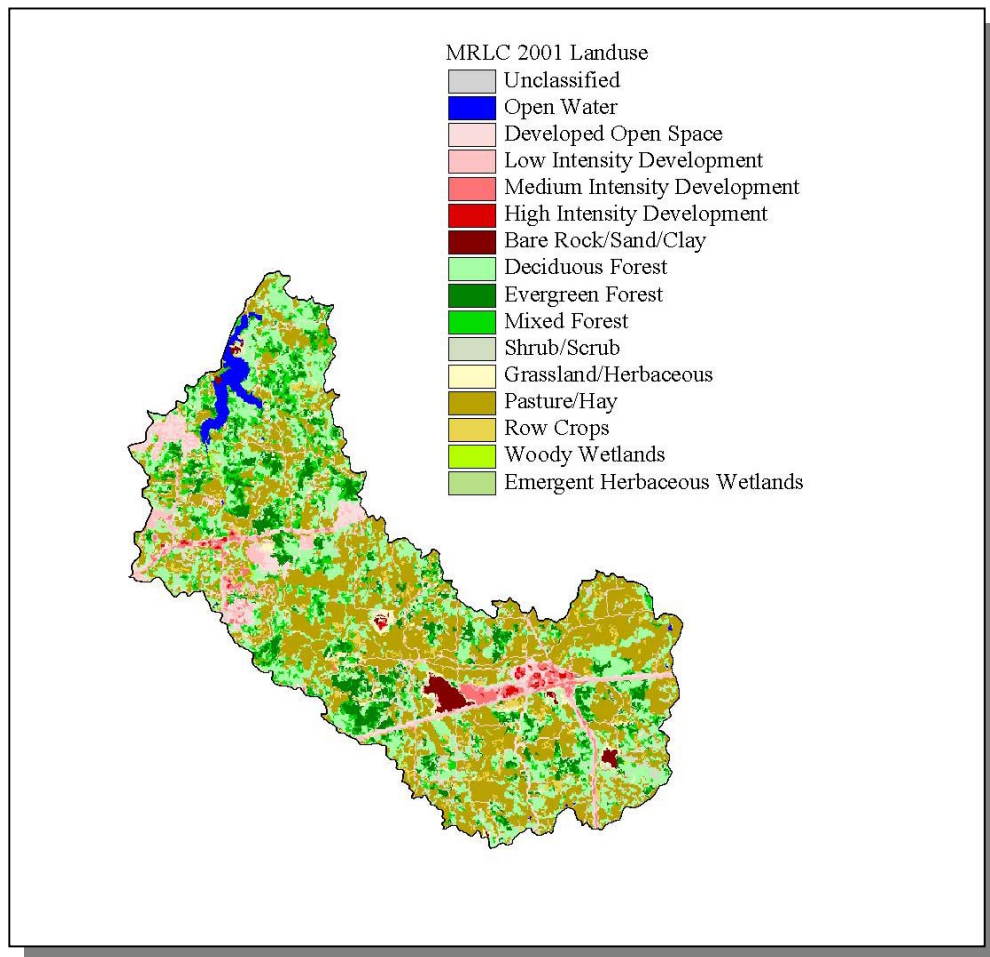
**Table 4-112. Annual Estimated Total Soil Loss in Subwatershed 051302010405.**

**4.2.D.vi. 051302010406 (Cedar Creek).**



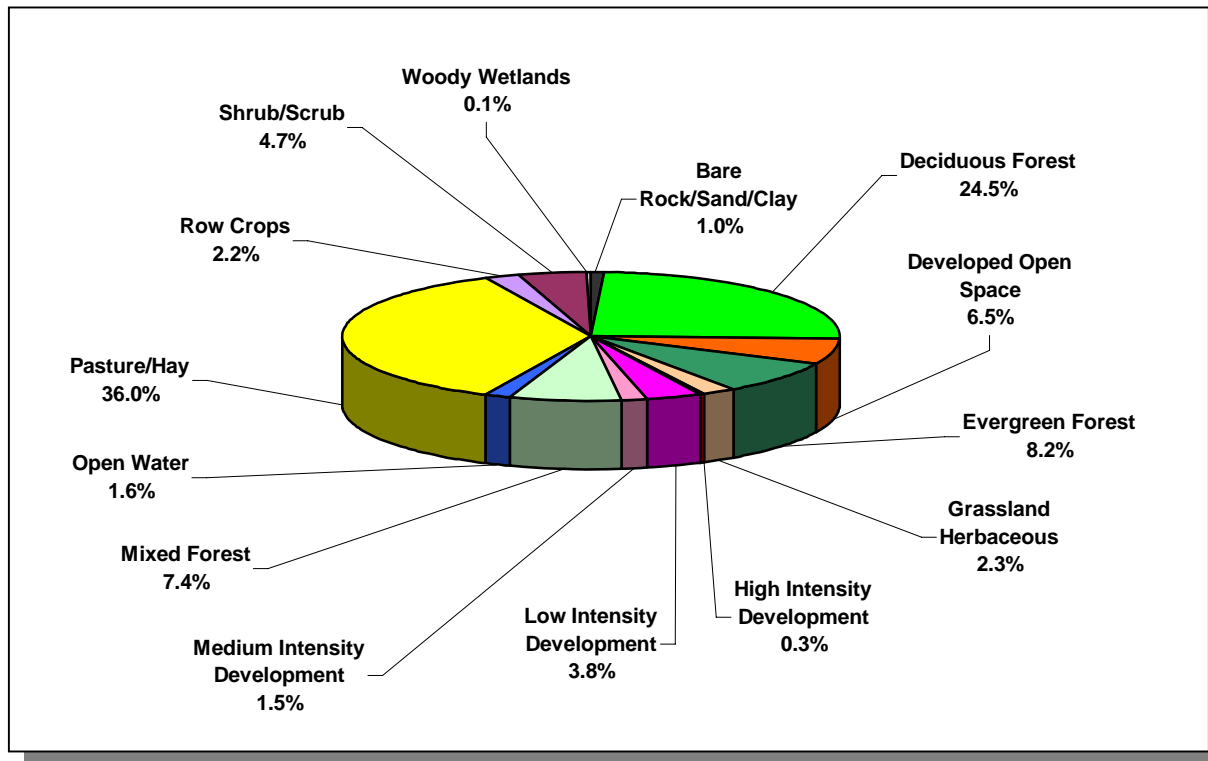
**Figure 4-142. Location of Subwatershed 051302010406.** All HUC-12 subwatershed boundaries are shown for reference.

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**Figure 4-143. Illustration of Land Use Distribution in Subwatershed 051302010406.**

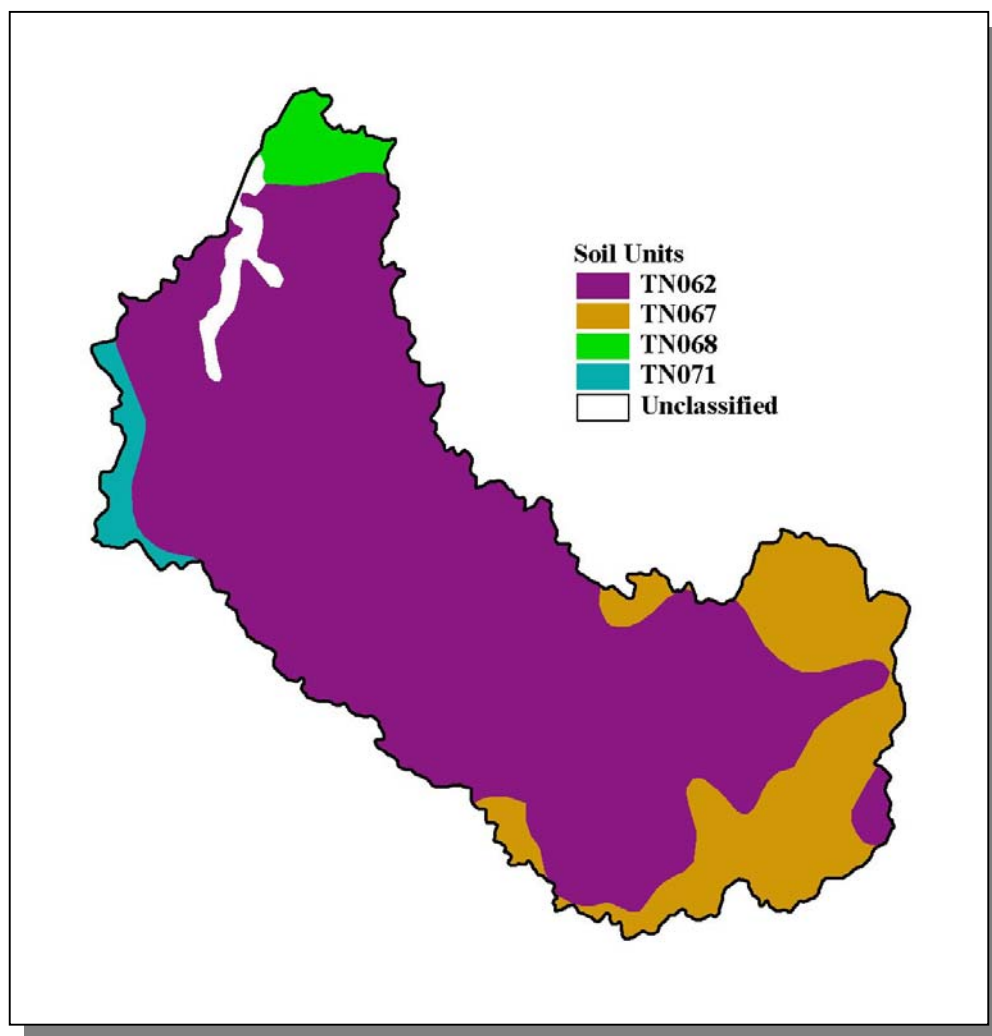
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**Figure 4-144. Land Use Distribution in Subwatershed 051302010406.** More information is provided in Appendix IV.



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**Figure 4-145. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010406.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37
TN071	0.00	C	2.37	5.70	Silty Loam	0.33

**Table 4-113. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010406.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	0.01	10	12	13	30.0

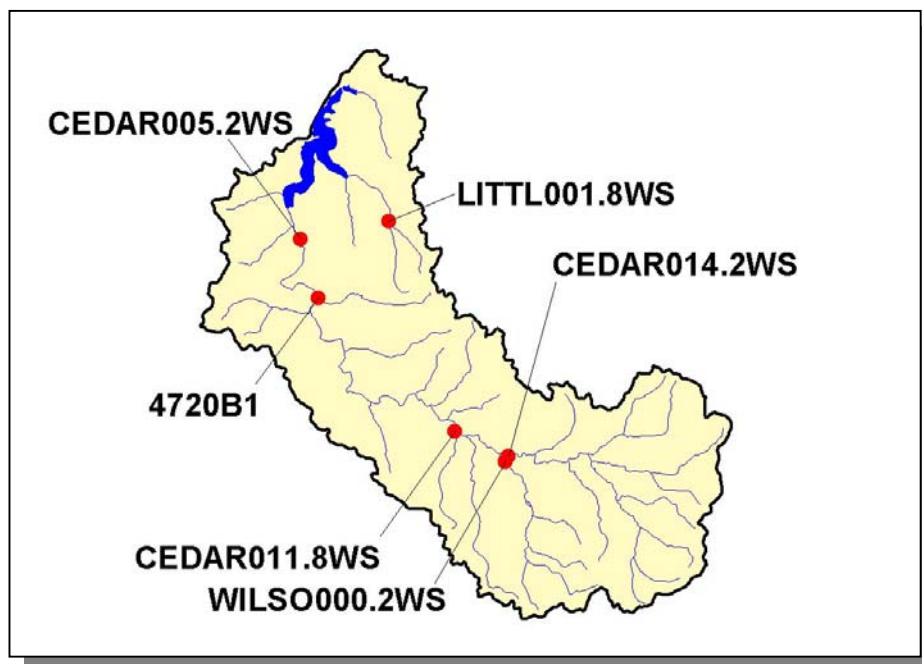
**Table 4-114. Population Estimates in Subwatershed 051302010406.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Lebanon	Wilson	15,208	6,592	5,440	1,137	15
Mount Juliet	Wilson	5,389	1,926	1,265	661	0
<b>Total</b>		<b>20,597</b>	<b>8,518</b>	<b>6,705</b>	<b>1,798</b>	<b>15</b>

**Table 4-115. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010406.**

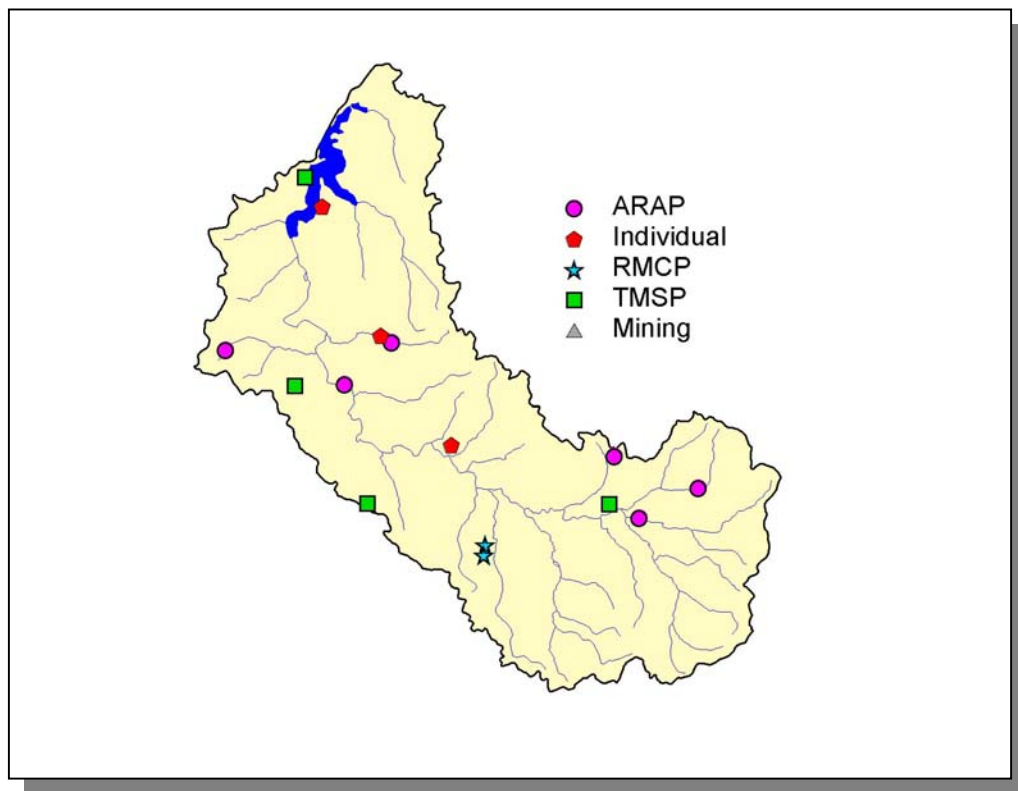


**Figure 4-146. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010406.** More information is provided in Appendix IV.

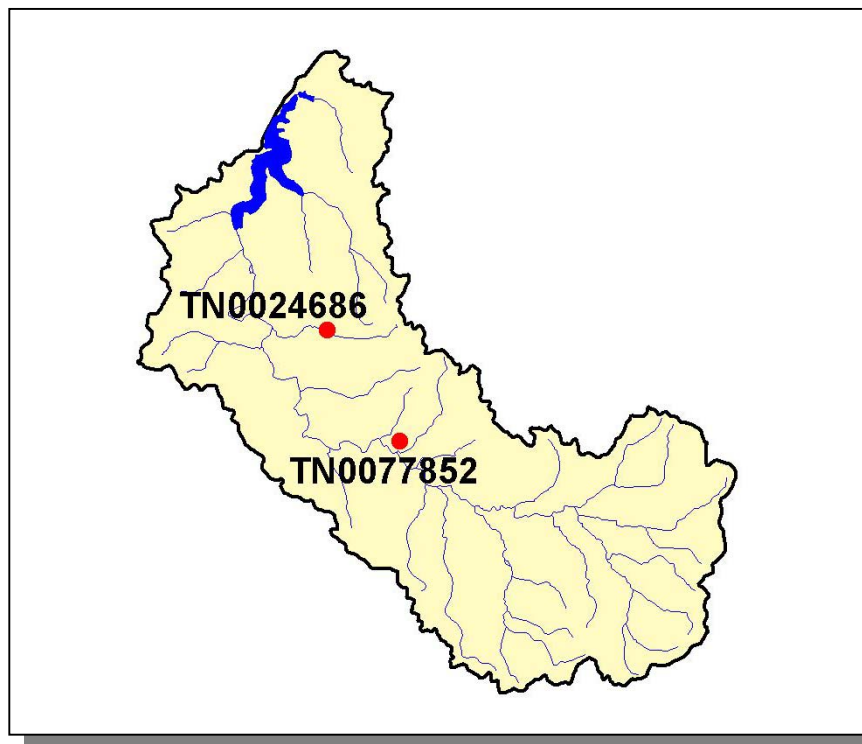


**Figure 4-147. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010406.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.vi.a. Point Source Contributions.**



**Figure 4-148. Location of Permits Issued in Subwatershed 051302010406.** More information, including the names of facilities, is provided in Appendix IV.



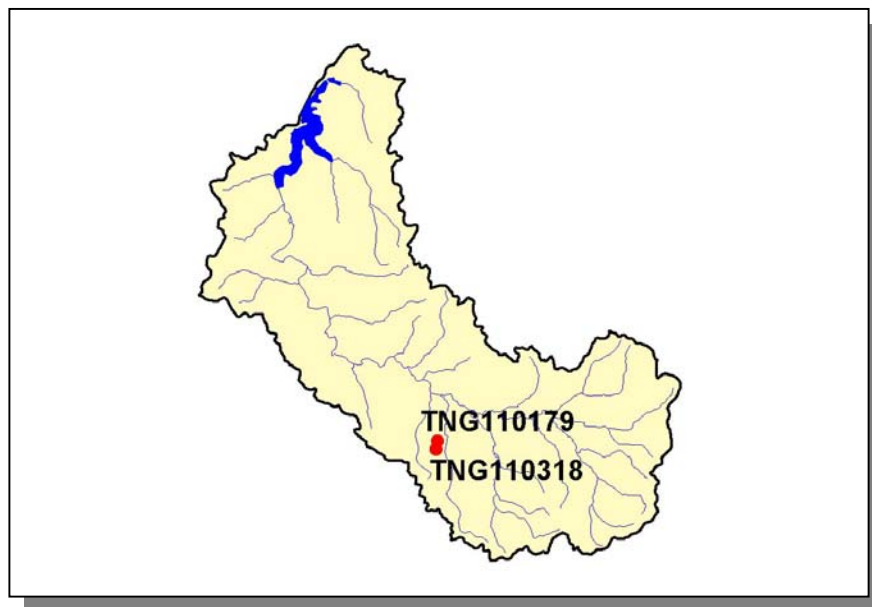
**Figure 4-149. Location of Active NPDES Sites in Subwatershed 051302010406.** More information, including the names of facilities, is provided in Appendix IV.



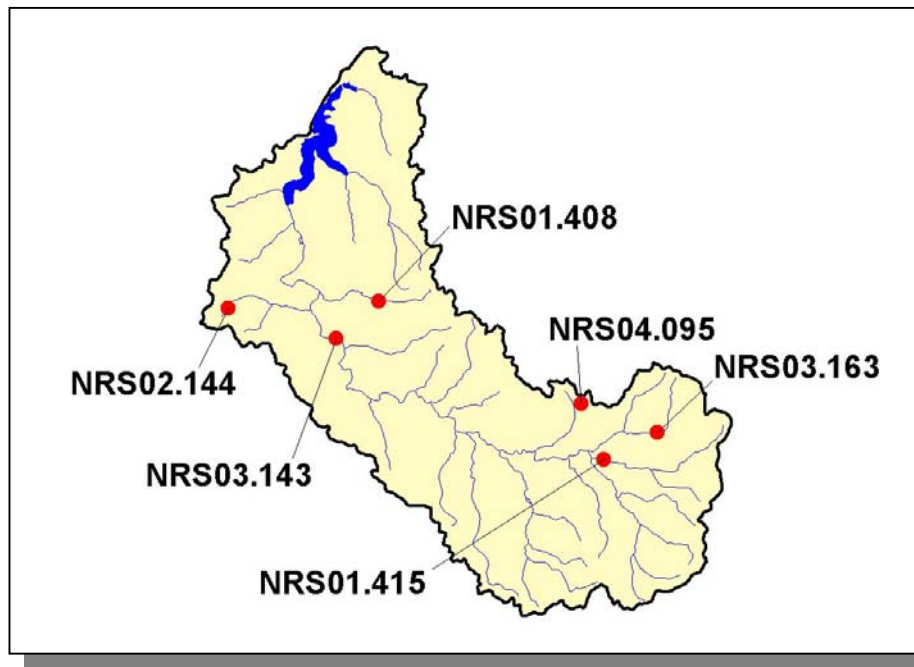
**Figure 4-150. Location of Active Mining Sites in Subwatershed 051302010406.** More information, including the names of mining operations, is provided in Appendix IV.



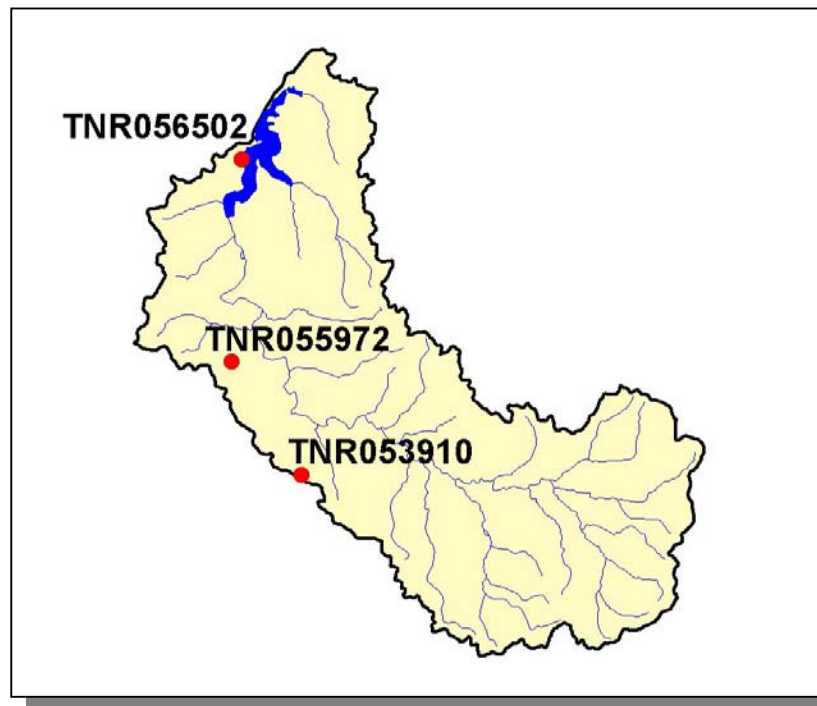
**Figure 4-151. Location of Permitted Herbicide Application Sites in Subwatershed 051302010406.** More information is provided in Appendix IV.



**Figure 4-152. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010406.** More information is provided in Appendix IV.



**Figure 4-153. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010406.** More information is provided in Appendix IV.



**Figure 4-154. Location of TMSP Sites in Subwatershed 051302010406.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.D.vi.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,785	3,351	99	6	112	31

**Table 4-116. Summary of Livestock Count Estimates in Subwatershed 051302010406.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-117. Summary of Livestock Count Estimates in Sumner and Wilson Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

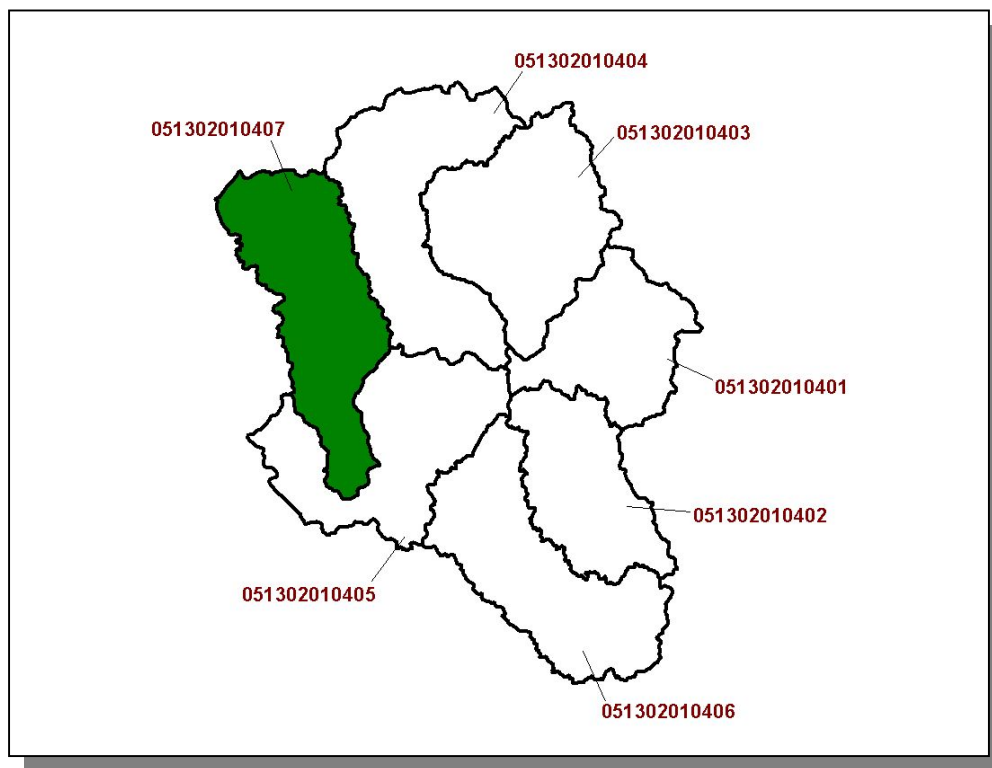
**Table 4-118. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner and Wilson Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.37
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.24
Soybeans (Row Crops)	6.73
Tobacco (row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.26

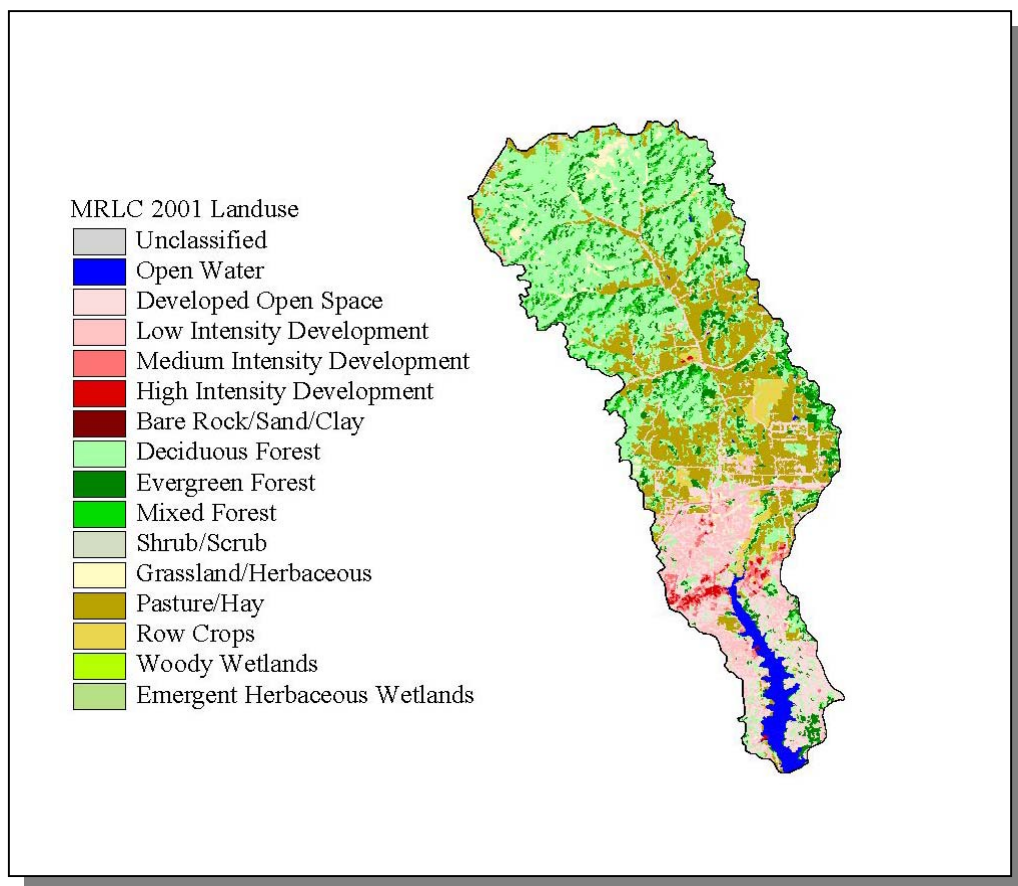
**Table 4-119. Annual Estimated Total Soil Loss in Subwatershed 051302010406.**



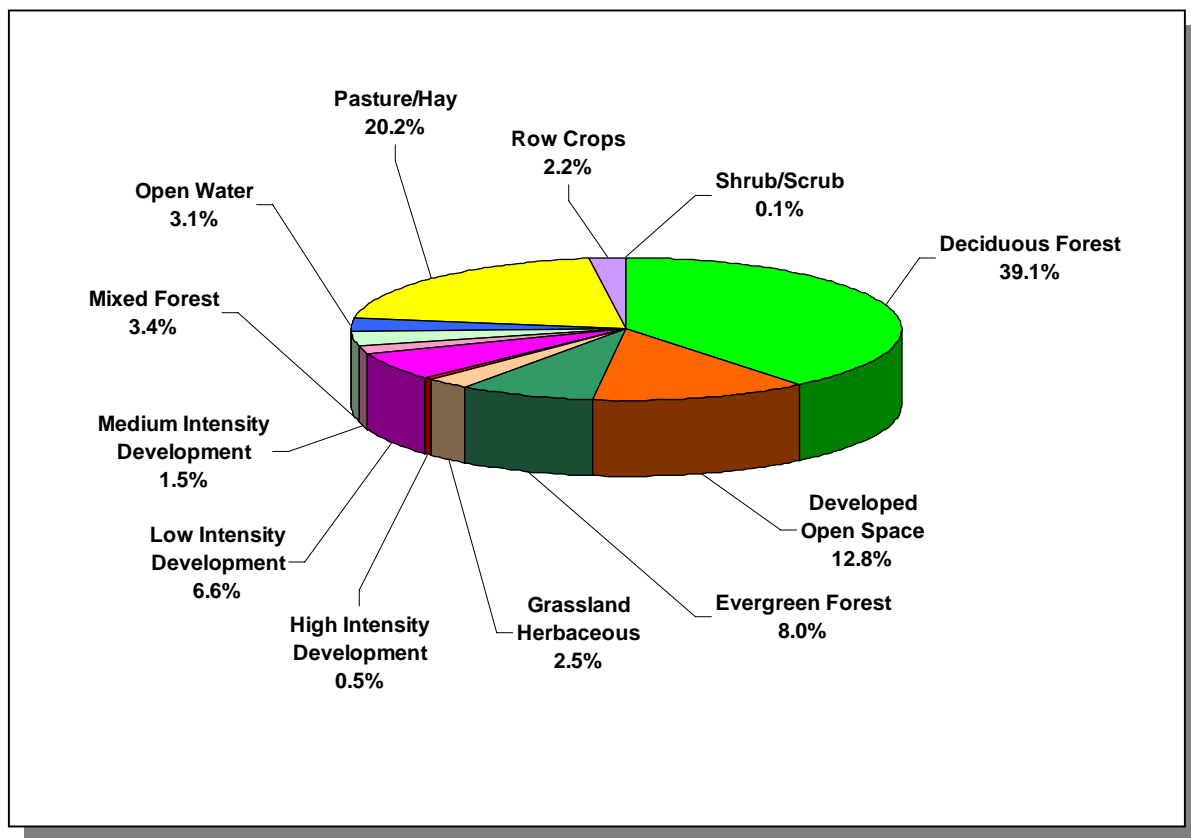
**4.2.D.vii. 051302010407 (Drakes Creek).**



**Figure 4-155. Location of Subwatershed 051302010407.** All HUC-12 subwatershed boundaries are shown for reference.

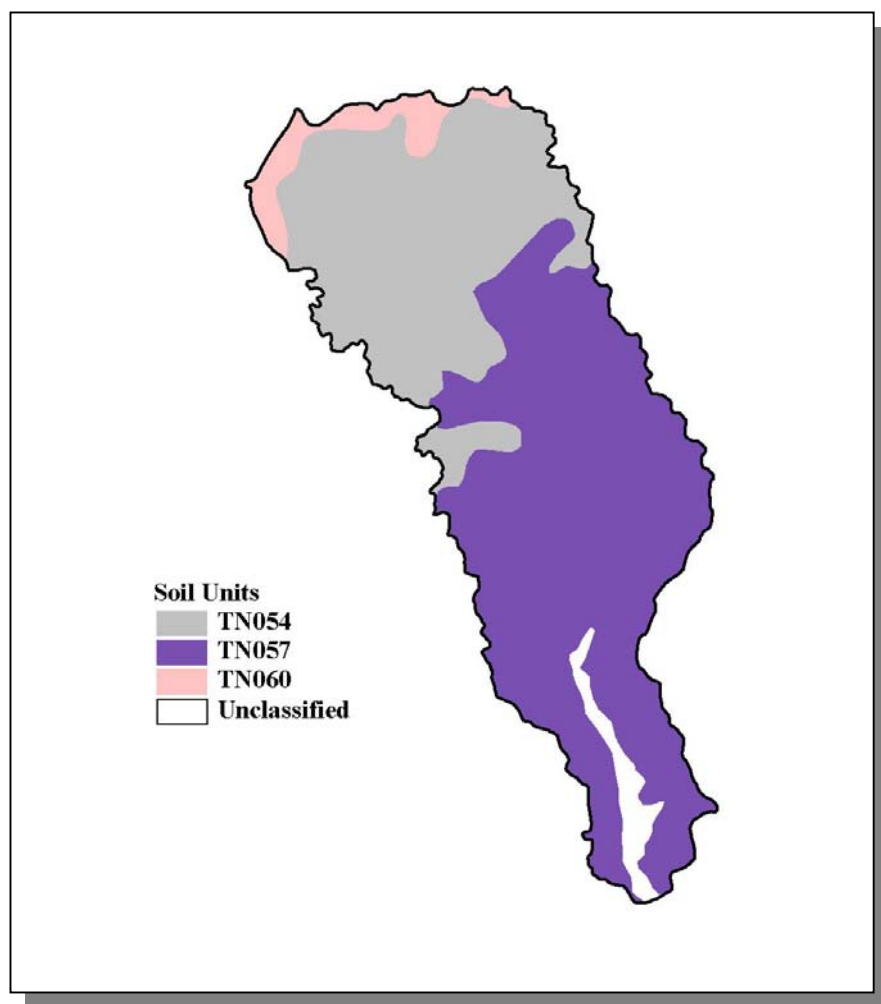


**Figure 4-156. Illustration of Land Use Distribution in Subwatershed 051302010407.**



**Figure 4-157. Land Use Distribution in Subwatershed 051302010407.** More information is provided in Appendix IV.

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**Figure 4-158. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010407.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

**Table 4-120. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010407.** The definition of "Hydrologic Group" is provided in Appendix IV.

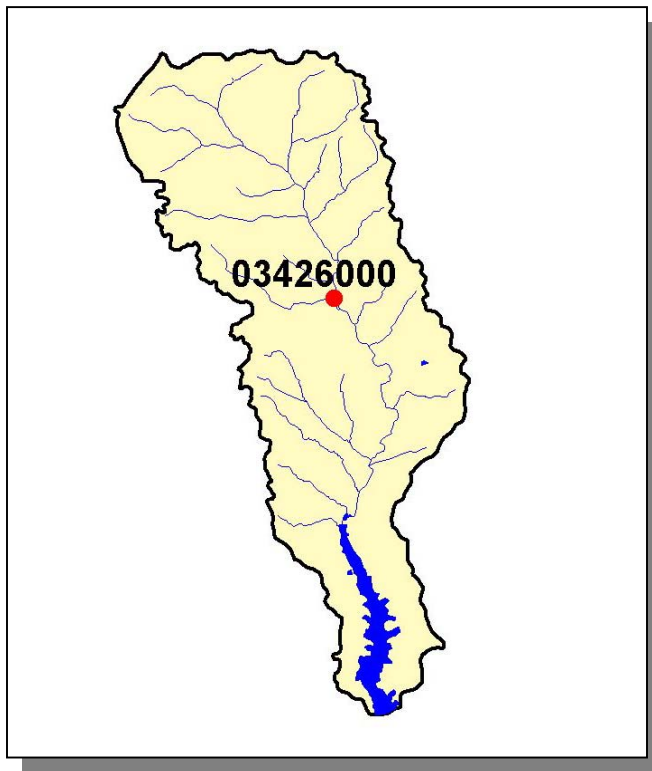
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Robertson	41,494	51,533	54,433	0.02	9	11	11	22.2
Sumner	103,281	121,936	130,449	8.14	8,410	9,929	10,622	26.3
<b>Total</b>	<b>144,775</b>	<b>173,469</b>	<b>184,882</b>		<b>8,419</b>	<b>9,940</b>	<b>10,633</b>	<b>26.3</b>

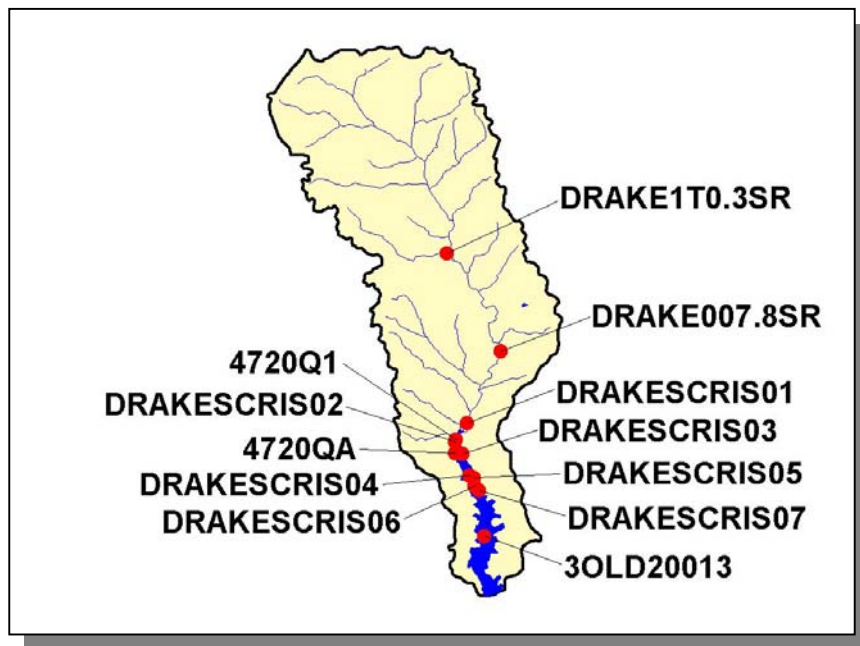
*Table 4-121. Population Estimates in Subwatershed 051302010407.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Hendersonville	Sumner	32,188	12,472	8,395	4,069	8
Millersville	Sumner	2,544	1,033	849	180	4
Whitehouse	Robertson	3,025	1,130	991	136	3
<b>Total</b>		<b>37,757</b>	<b>14,635</b>	<b>10,235</b>	<b>4,385</b>	<b>15</b>

*Table 4-122. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010407.*

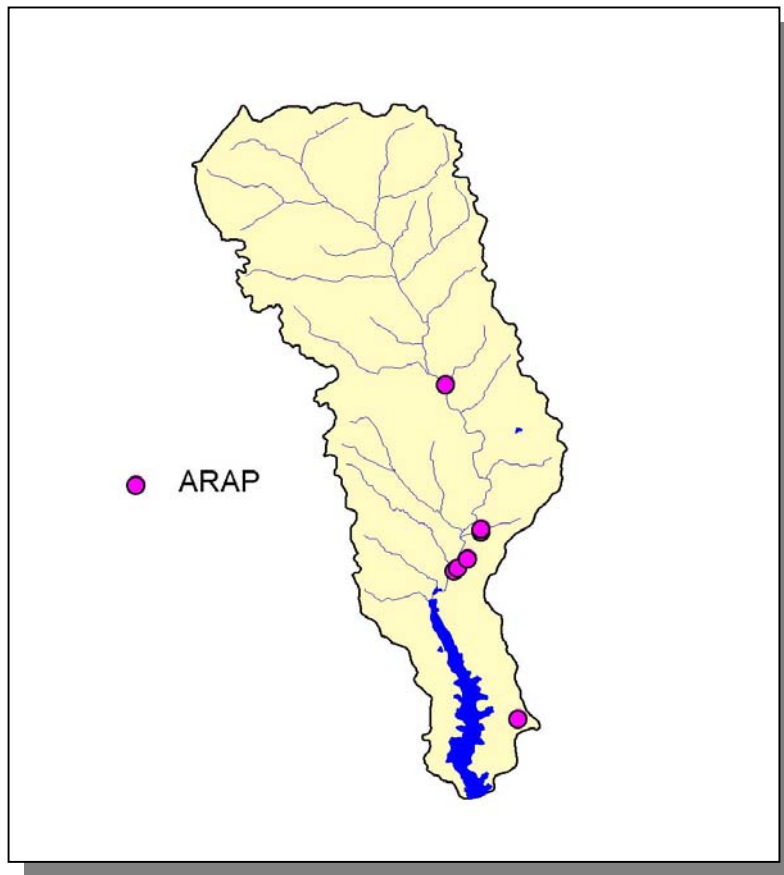


**Figure 4-159. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010407.** More information is provided in Appendix IV.



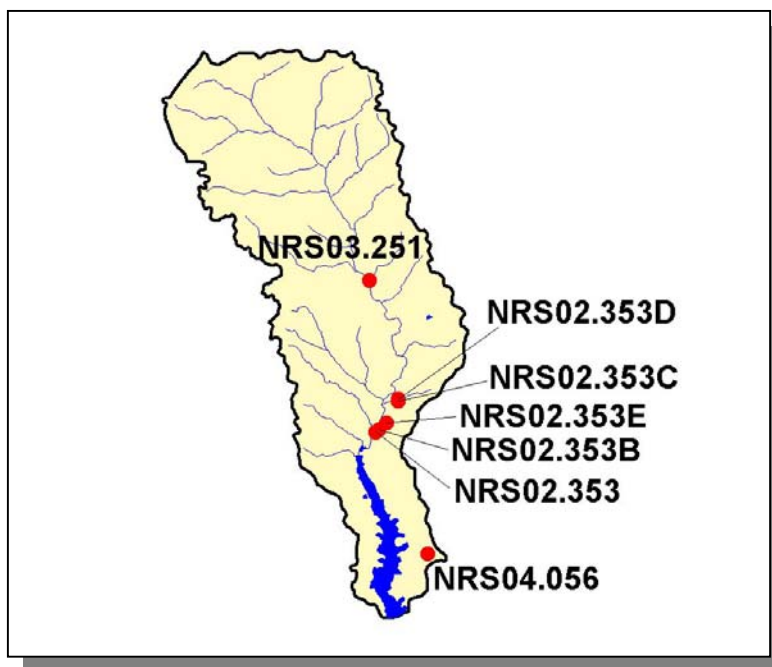
**Figure 4-160. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010407.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.vii.a. Point Source Contributions.**



**Figure 4-161. Location of Permits Issued in Subwatershed 051302010407.** More information, including the names of facilities, is provided in Appendix IV.

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**Figure 4-162. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010407. More information is provided in Appendix IV.**



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**4.2.D.vii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,372	2,778	94	<5	156	12

**Table 4-123. Summary of Livestock Count Estimates in Subwatershed 051302010407.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Robertson	22,502	47,887	3,478	31	6,982	279
Sumner	22,296	45,116	1,515	50	2,500	189

**Table 4-124. Summary of Livestock Count Estimates in Robertson, and Sumner Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Robertson	53.0	53.0	2.2	9.7
Sumner	88.2	88.2	2.0	6.3

**Table 4-125. Forest Acreage and Annual Removal Rates (1987-1994) in Robertson and Sumner Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.30
Soybeans (Row Crops)	11.27
Tobacco (Row Crops)	11.87
Wheat (Close-Grown Cropland)	1.68
Other Cropland not Planted	19.21
Conservation Reserve Program Lands	0.26
Other Land in Farms	0.27
Farmsteads and Ranch Headquarters	0.34

**Table 4-126. Annual Estimated Total Soil Loss in Subwatershed 051302010407.**